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ORIGINAL ARTICLES.

THE TREATMENT OF POSTERIOR DISPLACEMENTS OF THE UTERUS WITH THE UTERO-VAGINAL LIGATURE.[1]

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IN the *Centralblatt für Gynäkologie*, 1888, No. xii. p. 181, Dr. Adrian Schücking, of Pyrmont, calls attention to a new method of treatment by operation for this sometimes so exceedingly unmanageable pathological position.

I will not enter into the various methods of operating employed by different gynecologists. In my opinion, according to the condition present, an operation, if such is to be adopted at all, should be performed which will suit the respective case; we cannot therefore say, with any view to science, "I consider the operation originated by Dr. X. Y. Z. the best for retroflexion." Under certain conditions a simpler operation for this pathological condition seems quite feasible, and such a one, I have no hesitation in confirming positively, has been introduced by Dr. Schücking. We should be conservative in the acceptance of a new operation; but, when we have a considerable number of cases which render absolute proof of the utility of a certain operation, then we should have the right to speak a word in its favor and to request those experienced with gynecological work to give it a trial in suitable cases. That this new operation is one deserving such investigation, I hope to be able to demonstrate satisfactorily by citation of the cases thus treated by various operators.

The cases in which this operation is clearly indicated are those posterior displacements in which the uterus is freely movable and yet a pessary will not keep it anteposed, or a pessary will keep the organ anteposed only when it is worn, and the patient desires something done for her so that the support can subsequently be dispensed with.

[1] Read before the Medical Society of the State of New York, February 4, 1891.

Posterior displacements held in malposition by moderate perimetritic adhesions can be treated, after first breaking up the adhesions, by Schultze's or Brandt's method. According to Shücking and Thieme, even cases of prolapsus can be cured by the utero-vaginal ligature. I should, however, want better proof than I have experienced before speaking favorably of it.

The operation is done as follows:

After disinfecting the vagina and the external genitals, with the same care as for an abdominal operation, the bladder and bowels having been previously emptied, the uterus is drawn down as far as possible with a double tenaculum forceps. The cervical canal should be sufficiently dilated and the uterus curetted and washed out with hot water, if necessary. The anterior lip of the portio vaginalis is now grasped and the organ thoroughly anteflexed, making sure that no intestines are in front of it, which can be most readily done by placing the patient in Trendelenberg's position. An assistant draws the uterus gradually downward and to the left. The needle invented by Schücking is now introduced, with the needle *within* the canula. An assistant now pushes the bladder to the left side, and the operator, having anteflexed the uterus and having the corpus pushed to the right by the instrument, with the index-finger of his left hand marks the place where the needle will protrude—which is readily done by feeling the end of the canula. Now the thumb pushes forward the lever, which is screwed on to the needle wire within the canula; this causes the needle to pass through the uterus and

vaginal wall. The carrying thread, with which the needle has been previously armed, is now grasped and pulled out, whilst the needle is drawn back again within the canula by means of the lever. The ligating silk is now drawn through by means of the carrying thread, and the two ends are tied together, when it will be found that the uterus is in a position of anteflexion. A serous agglutination subsequently forms in the lower part of the vesico-uterine space.

A suitable pessary should be introduced after

operation, which ought to be worn about three months. The silk ligature should be removed in from six to ten weeks. A modification of this operation by Thieme seems to me worthy of notice, viz.: instead of bringing the proximal end of the uterine suture out at the os externum, the anterior wall of the portio vaginalis at its vaginal junction is pierced again, and the suture is brought out at that point, the object being, *first*, the prevention of cutting of the suture in the cervix; *second*, placing the uterus more into anteversion instead of flexion.

One of the main dangers in doing this operation is injury to the bladder, which has occurred several times in the hands of various operators, but I am confident that with proper care it can always be avoided. To me it occurred in the first case operated upon; it was due to an instrument whose canula was too weak and to improper technique. In no case of injury to the viscus has any ill consequence followed. I use a block-tin sound to push the bladder to one side. Sometimes bloody tingeing of the urine occurs after the operation, which I think due to slight injury by the sound used to push the bladder to one side, rather than to injury with the needle; in the only case in which it occurred in my hands it disappeared at the second urination. Schücking and Thieme both advise irrigation of the bladder before and after operation with a solution of thymol. Zweifel makes a transverse incision in the anterior vaginal wall, at the point where the needle should pass through, which facilitates that part of the operation. This is corroborated by Schücking, who followed Zweifel's advice.

Altogether 141 patients have been operated upon by this method *without* one serious accident; for the purpose of statistics, however, all are not available. In Schücking's list there are 20 who were operated upon by his original method, viz., leaving in the suture only ten to fourteen days, and no pessary after operation; here there were 8 failures.

Klotz, of Dresden, has operated 22 times without stating the results. It is to be presumed, however, if these had not been satisfactory he would not have done the operation so frequently.

Nine cases operated upon by myself show 2 failures; that is, the uterus is again posterior in 2 cases. This I think also due to the neglect of a pessary after operation.

Of 53 operations done by Schücking according to his present method only 2 failures occurred; Thieme, 14 cases, no failures; Zweifel, 7 cases, no failures; Ruhl, 4 cases, no failures; Debrunner, 12 cases, 4 failures.

Two of the latter's cases cannot be counted as evidence for final result.

I have read the letter of one patient to Dr. Schücking, in which she states that she is now relieved of her former suffering. She had been ill for a number of years, during which time she was in the hands of one of the ablest men in Germany without much improvement.

To Dr. Schücking I hereby express my sincerest thanks for his kindness in showing me the proper technique of his operation and for the statistics of cases.

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SO-CALLED LACERATION OF THE PERINEUM.[1]

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ON account of its hidden position between the buttocks, the perineum is little exposed to injury from without. Still, under particular circumstances, wounds of this kind are incurred. Thus, punctured, incised, torn, or contused wounds, which may be extensive enough to cause a complete laceration of the partition between the genitals and the rectum, are occasionally produced by falling down on the upright of a chair, the slat of a fence, or a pitchfork concealed in a haystack, or by sliding down the balusters of a staircase against the boss of the newel-post. Similar lesions are sometimes caused by the goring horn of an infuriated bull, or by rape, especially when there is a marked disproportion between the organs that come in contact.

Of much more frequent occurrence are injuries due to a force coming from within. An acute prolapse of the uterus or the expulsion of a large fibrous polypus may cause such lacerations; but by far the most common cause is childbirth, and that is the kind of laceration to which I shall confine myself in this paper.

In most text-books upon obstetrics and gynecology we find descriptions of laceration of the perineum, which give an entirely erroneous idea of the lesion sustained, and are unfit to form the base of an intelligent conception of the pathological conditions caused by it, and the proper therapeutic measures to be adopted in different cases.

The common way of dividing perineal lacerations takes only the extension of the tear into consideration. Thus, authors distinguish three, four, or five degrees of laceration, according to the extension of the tear—through the fourchette alone, to a point between the vulva and the sphincter ani muscle, to the external circumference of the sphincter, to some point in the expansion of the sphincter, through

[1] Paper read before the New York Academy of Medicine, March 5, 1891.

the whole thickness of the muscle, and more or less up the recto-vaginal septum.[1] In my opinion this doctrine overlooks the most important point.

While it is unnecessary thus to divide a tear between the vulva and the rectum into half a dozen varieties, this elaborate division does not comprise some of the most important lesions of the genital outlet resulting from childbirth. It is due to the deplorable confusion between the entrance of the vulva, *rima pudendi*, and that of the vagina, *introitus vaginæ*, to which I have already called attention in my paper on "The Obstetric Treatment of the Perineum," published in the *American Journal of Obstetrics*, in 1880.

The old authors used the expressions *vulva*, *matrix*, and *uterus* to designate the whole genital canal from the rima pudendi to the fundus uteri, just as the public yet nowadays frequently uses the word womb in this sense. Modern medical authors would never confound the uterus and the vagina, but it is by no means rare, or, rather, it is quite common yet to confound the vulva and the vagina and to speak of the vaginal canal in such a loose way that it gives rise to considerable confusion. Still, the two latter organs are divided by just as distinct a line of demarcation as the two former, the limit between the vulva and the vagina being the hymen or its remnants, just as the vaginal portion with the os forms the limit between the vagina and the uterus. The rima pudendi is a slit in the skin, running in a straight line in an antero-posterior direction from the mons veneris to the fourchette; the entrance to the vagina lies an inch or two deeper, is circular, surrounded by mucous membrane and muscles, and is the seat of the hymen or its remnants. These two openings form two comparatively narrow rings at and near the outlet of the parturient canal, and the upper one is, again, the narrower of the two. These rings are, therefore, the two places where laceration commonly begins during childbirth, and from which it may extend more or less into the neighboring tissues. The upper ring being the narrower of the two, is also more frequently torn.

These two rings differ much from one another in their component parts. The outer or vulvar ring consists of skin, a thin expansion of unstriped muscular fibres called *woman's dartos*, adipose and connective tissue.

The inner or vaginal ring is covered with mucous membrane, and under that lies a collection of muscles and fasciæ which give it greater solidity, allow a considerable dilatation, especially after the softening and new growth of loose connective tissue that takes place during gestation, but which, if the tension becomes too great, may give way. These muscles deserve particular attention, since it is injury to them that constitutes the true cause of the sufferings usually attributed to laceration of the perineum. They form three layers. The superficial layer consists of the bulbo-cavernosus or sphincter vaginæ muscle, the superficial transversus perinæi muscle, and unstriped muscle fibres uniting the two posterior ends of the bulbo-cavernosus muscle. The middle layer is represented by the transversus perinæi profundus muscle and the constrictor vaginæ. The deepest layer is formed by the levator ani muscle.

The *bulbo-cavernosus* muscle receives some fibres from the external sphincter ani, the levator ani, and the superficial transversus perinæi muscles, and others originate from the ischio-perineal ligament and the neighboring tendinous tissue. It is inserted on and near the clitoris. It lies outside of the vulvo-vaginal gland and the vestibulo-vaginal bulb, which it compresses, and is not a very powerful muscle. It surrounds the vaginal ring on the sides, but does not close it in front nor behind, and the name sphincter vaginæ is therefore less appropriate.

The *transversus perinæi superficialis* muscle closes the vaginal ring behind. It is a pair of still weaker muscles, but, going from the inside of the tuberosity of the ischium to the transverse septum of the perineum, bisecting the angle between the bulbo-cavernosus and the sphincter ani externus, intermingling with both, it steadies the perineal body, and helps during parturition in pushing the presenting part of the child forward toward the pubic arch. In many women this muscle takes a more forward course, so that it does not reach the perineal body at all, but is fastened to the outer edge of the bulbo-cavernosus muscle. With such an insertion its function can only be to open the vaginal entrance. The superficial layer of muscles is situated between the superficial perineal fascia and the anterior layer of the deep perineal fascia.

The muscles of the deeper layer are little developed, not clearly separated from one another, and differently described by different anatomists. They are situated between the two layers of the deep perineal fascia.

The *deep transversus perinæi muscle* arises from the ramus of the ischium and goes horizontally to the sides of the vagina, which it helps to steady.

The *constrictor vaginæ muscle* consists of a few fibres which arise from the transverse septum of the perineum and encircle the vaginal entrance as a sphincter.

Thus the deep transversus and the constrictor vaginæ correspond to the superficial transversus and the bulbo-cavernosus of the superficial layer.

Of all the muscles contributing to the formation of the vaginal ring, the *levator ani* is by far the strongest and most important. It forms a horseshoe-

[1] A. Charpentier: Traité pratique des Accouchements. Paris, 1883, vol. ii., p. 223.

shaped muscular expansion, which is open in front, is attached in a wide circumference to the walls of the pelvis and forms a double loop behind the vagina and the rectum. It is generally described as two muscles—the levator ani proper and the coccygeus—but they touch one another with their edges, so that one is a continuation of the other, and they often even coalesce. Under all circumstances they form together a pelvic diaphragm corresponding to that which limits the abdominal cavity above. The levator ani takes its origin from an oblique line on the posterior surface of the body of the pubic bone, from a small circle just in front of the spine of the ischium, and from the tendinous arch, part of the pelvic fascia, extending between these two bony attachments, the pubic portion goes backward and inward, crosses the vagina, to the sides of which it is bound by strong connective-tissue attachments. Its fibres are interwoven with the longitudinal fibres on the lateral aspects of the vagina. Some loops go from side to side between the vagina and the rectum, but the greater part of the muscle goes behind the latter, forming loops without any intermediate tendon. They hug the concavity of the end-curve of the rectum and support it from below. The levator goes in between the external and internal sphincter and intermingles with both of them, as well as with the longitudinal fibres of the rectum.

This muscular expansion is covered above and below with a fascia; above it is the vesico-rectal part of the pelvic fascia; and below it is the anal fascia, part of the deep perineal fascia.

Beside other functions that do not concern us here, it draws the anus forward in the direction of the symphysis, pulls the vagina forward during childbirth, and pushes the child forward, so as to make it turn the pubic arch.

Between the vulvar and vaginal ring behind is the *fossa navicularis*, and between both rings and the rectum is the *perineal body*. After having been entirely neglected until it was described by Henle and Savage, this structure acquired all of a sudden an enormous importance, and was made the "keystone" that supported all the pelvic organs. A great deal has been written about it, and different authors have assigned a very different shape to it, but the study of sagittal sections of the pelvis show that it has a great variety of shapes. Sometimes the whole space between the rectum and the vagina, up to the cervix uteri, forms one triangular surface. In other cases this space is easily distinguishable as an upper narrow and a lower broad part, the latter alone deserving the name of perineal body; but this body appears again with very different forms and differs in extension upward. It may just form a slight swelling, so that the whole sagittal cut becomes nearly club-shaped. Sometimes the whole body lies below the hymen, while in other cases it extends more or less up behind the vagina. The shape is sometimes nearly quadrangular, with one side turned to the skin, one to the rectum, one to the vulva, and one to the vagina. In others it has the shape of the quadrant of a circle; in others again that of the receiver of a retort, the neck of which is formed by the narrow part between the vagina and the rectum. This great diversity of forms is easily understood when we take into consideration the fact that all the parts concerned are made of more or less soft tissue.

The perineal body is composed of the posterior ends of the bulbo-cavernosi muscles, unstriped muscle fibres uniting them behind, fibres belonging to the superficial transversus perinæi muscle, the external and internal sphincteres ani and the levator ani muscles, the ischio-perineal ligament, the posterior part of the superficial and deep perineal fasciæ, the anal fascia and adiposè tissue. It is covered below by the skin lying between the anus and the rima pudendi, behind by the rectal mucous membrane, above and in front by the mucous membrane of the vulva and sometimes of the vagina. It has no definite lateral limits, unless we artificially suppose it to be continued to the tuberosity of the ischium. The cutaneous surface is shorter than in man, measuring only one-half to one inch in length, while the distance from the anus to the entrance of the vagina, the true length of the perineal body, is about one and three-fourths inches. According to what has just been said about its upper limit no definite height can be ascribed to it.

Small as this body is, it is of great importance in forming the centre of the whole perineal region, where muscles, fasciæ, and ligaments come together. As they are fastened to the surrounding bones the perineal body becomes the chief support of the pelvic floor. It keeps the vagina and the rectum in their proper relative position. During childbirth it forms a strong barrier against which the child is being pushed from above and pressed forward around the pubic arch by passive and active counterpressure. During this act its power of resistance is often overcome, and a laceration takes place.

Beside the two rings we have called attention to at the outlet of the genital canal, a third ring, formed by the internal and external sphincteres ani muscles, must be considered. Its function is to close the intestinal canal. Examined from the vagina, the anus forms a weak point in the pelvic floor. During childbirth it is pushed and drawn forward, and becomes enormously distended, as does all the surrounding tissue between the coccyx and the vulva.

When the child is pushed against the vaginal ring it may break through to the rectal ring and be born

through the rectum. The rectal ring may either burst or withstand the great tension, and the vulvar ring remain intact. The child may also be born between the rectal and vulvar ring, so that both remain intact, while the vaginal ring above is broken—so-called central perineal rupture.

A modification of this is the condition where first a central rupture forms and then extends into the vulvar ring. Another modification is that in which the central laceration stays incomplete, that is to say, no perforation takes place in the perineum, part of the tissue between the skin and the vagina remaining entire.

While the lesions so far mentioned are rarities, we come now to the most common of all, namely, those cases in which the vaginal ring alone is affected. These tears may be superficial or deep, open or concealed, longitudinal or transverse.

According to Duncan[1] every primipara sustains a laceration of the posterior part of this opening, but my own observations have taught me that this is a mistake. I have notes of cases in which there were tears of the labia, the fossa navicularis, the fourchette, and even the vagina, without any injury to the vaginal entrance. Tears here are, however, common, and may extend more or less upward into the vagina and more or less downward into the fossa navicularis. If they are superficial and only go through the mucous membrane they are of little importance, the severed parts being kept in contact by the deeper, and healing easily.

The deep tear of the vaginal entrance, implicating the levator ani muscle, is usually found backward and outward in the direction of the tuberosity of the ischium, the reason for which is probably that the muscle is caught between this point and the head, while in the median line the intervening rectum and the double fascia that descends in front of it as a continuation of the pelvic fascia, furnish a soft pad which protects the muscle.

Sometimes the muscle snaps in the depth of the tissues, while the mucous membrane, containing more elastic fibres, resists the strain, so that the result is a submucous tear, just as the biceps during a sudden flexion of the arm may burst under the skin. As in rupture of the biceps we can put our fingers in between the two retracted ends of the muscle, so in the rupture of the levator ani we can put one finger into the gap, only with this difference, that the rupture does not extend through the whole width of the muscle. At, and to some variable extent above, the vaginal entrance, we feel a V-shaped break in the ring.

The power working eccentrically, the rupture in the vast majority of cases takes place in a radius; in other words, the ring is broken, and the lesion is a longitudinal rent in the genital canal. Exceptionally, the direction of the rent may be more or less transverse. The most common rent of this last kind is a tear along the base of the insertion of the hymen, whereby this membrane is torn more or less completely loose from its connections. Drs. T. A. Emmet[1] and Matthews Duncan[2] describe also other transverse tears, and the former thinks that this form of lesion is the common one. Admitting the possibility of such a tear by which the whole vaginal ring is sundered from the upper part of the vagina, or a partial tear produced by a transverse fold being caught by the advancing child and torn loose from side to side, in my opinion this is and must be a comparatively rare lesion. When the distinguished American author thinks that it is the common form of injury in childbirth, I am inclined to account for it by the fact that at the time he turned his observation to the tears of the vaginal outlet he had long ago given up obstetric practice. Because we find transverse cicatrices in gynecological patients, we cannot conclude that the fresh tear had the same direction. When a longitudinal rent does not heal by juxtaposition of the torn surfaces, it changes direction, and leaves a transverse line of cicatrization. This, I believe, is the explanation of the two facts with which everybody who is engaged both in obstetrical and gynecological practice will be familiar, namely, that fresh rents examined immediately after delivery nearly always follow the direction of the axis of the parturient canal; and, on the other hand, that transverse cicatrices are exceedingly common in women who seek relief for diseases of the genitals.

A tear involving the levator ani at the vaginal entrance deprives the pelvic structures above of their necessary support. As soon as the patient gets up she has a disagreeable feeling of looseness and bearing-down. In the course of time the vaginal mucous membrane bulges out in front and behind, the bladder sinks down, the uterus is first retroverted, then retroflexed, then it descends, and may finally hang between the legs. The strain on the utero-sacral ligaments, the broad ligaments, and the connective tissue of the pelvis causes pain in the sides of the pelvis, and backache. It interferes with free circulation in the pelvis, causes a sensation of heaviness, and produces hyperplasia of the uterus. The vagina is inverted, and becomes unfit for one of its purposes. The cervix is drawn out to a great length, its lips everted, and, in consequence of friction against the clothes, a large ulceration forms around what seems to be the os, but in reality is a point situated much higher up in the canal.

[1] Matthews Duncan: Papers on the Female Perineum, London, 1879, p. 8.

[1] T. A. Emmet: Trans. Amer. Gyn. Soc., 1885, vol. x. p. 161.
[2] M. Duncan: Loc. cit., p. 24.

The prolapse of the anterior wall of the vagina is commonly called cystocele—a correct name, since the bladder always forms part of the swelling. The prolapse of the posterior wall is commonly called rectocele, which is not correct. The rectum nearly always stays in its normal place, and the vagina slides away from it. It is easy to satisfy oneself on this point by seizing the prolapse between the index-finger and the thumb. If it contained the rectum, two slips would be felt when the seized tissues slip out between the fingers: one representing the rectal wall, and the other the vaginal wall; but we feel only the latter. The reason of this difference is, that the bladder is bound to the upper part of the vagina and the cervix with short, tight connective-tissue, while that connecting the posterior wall with the rectum is much looser.

It is possible that the anal ring alone may be broken. Dr. T. A. Emmet[1] has reported a case of this kind in which the rupture had taken place behind, leaving the vulvar ring uninjured, and since nothing is said about the vaginal entrance, it is probable that that also had escaped.

The vulvar ring may be broken, and that is the lesion that has been earliest recognized, and which yet forms the base of most desciptions of lacerations of the perineum. The many classes into which this tear has been subdivided are superfluous. The only question of importance is whether the vulvar ring alone is implicated, or the tear extends through the anal ring—so-called incomplete and complete laceration of the perineum.

The injury commonly takes place in the median line, beginning at the posterior commissure and extending more or less backward. But if the perineum escapes, or only suffers little, especially if the accoucheur helps to press the head forward against the symphysis, the injury to the distended vulva often takes the shape of superficial tears on the labia majora, or deeper tears in the labia minora and the vestibule, near the clitoris.

Nearly all these tears have a longitudinal direction, more or less parallel to the axis of the parturient canal, or at right angles to the rima pudendi, but if the severed halves of the perineum do not unite by first intention, they heal separately, each forming one-half of the cicatrix, in which way cicatrices with a transverse direction are formed. By involution taking place in the vulva after the enormous distention during childbirth the direction of cicatrices is also changed. I have seen real transverse tears by which a strip of mucous membrane extending from one side to the other of the rima pudendi, is torn loose from the fossa navicularis, and tears of the labia majora parallel to the rima pudendi, but such lesions are exceedingly rare compared with longitudinal tears.

The consequences of tears limited to the vulvar ring are slight or none. Most women are little concerned about an affection which does not cause them any discomfort, but the male may find less satisfaction in sexual intercourse on account of the enlargement of the vulva, and sometimes there is a tenderness of the scar which causes the woman pain.

In a complete superficial tear both the vulvar and the anal ring are broken and form a single instead of a double ring; the sphincter retracts, its ends being plainly marked by a little glazed pit on either side; where the perineal body should be is seen a V-shaped cleft; the mucous membrane of the rectum rolls out, forming a little red, soft, puckered cushion at the posterior circumference of the anal opening; and the patient has no control over flatus and fæces, which escape involuntarily, and make the poor woman an object of disgust to herself and others. But if the vaginal ring is intact she has none of the symptoms appertaining to prolapse, which we have referred to in speaking of the rupture of that aperture.

I recently operated on an elderly lady who had had for twenty years a tear through the perineal body, extending one inch and a quarter up the rectum, but where the vaginal ring had not suffered at all. The sphincter ani could be felt as a thick resistant ring without a break, and there was neither cystocele, rectocele, nor the slightest descent of the uterus, nor any symptom of pelvic trouble whatever.

Just as the tear in the vulvar ring may be combined with that of the anal ring, we may have a combination of the vulvar and vaginal rupture, or of all three, the result as to symptoms being a combination of those characteristic of the single tears.

In regard to treatment I shall limit myself to some general remarks.

The preventive treatment lies without the scope of this paper, and has been considered at length in my earlier paper, referred to above.

Under lucky circumstances Nature can, perhaps, effect a cure of any tear. I have myself seen this in incomplete laceration, where the whole perineal body was severed to the rectum; and by a cure I mean agglutination of the entire torn triangular surfaces.

During my services at the Maternity Hospital in the years 1885–86, I examined numerous primiparæ shortly after delivery, and again before they left the hospital, and took detailed notes of the tears of the parturient canal at the two periods. Thus, I satisfied myself that, with few exceptions, the tears in the fossa navicularis, on the labia, through the

[1] Trans. Amer. Gyn. Soc., 1883, vol. viii. p. 202.

vaginal ring, and in the vagina, healed so as to form linear cicatrices. In all the observed cases there was no, or only a very slight, tear of the cutaneous perineum, since all longer tears are immediately stitched, and therefore cannot be examined, and all the patients were treated with my occlusion bandage,[1] which exercises a certain pressure on the external genitals.

Similar results are claimed to have been observed in cases in which the tear extended so far up the rectum that all three rings must have been broken. But as natural cures in such cases are little short of miraculous, no man in his senses would wait for them. As a rule, Nature effects only a partial healing; the parts heal, of course, in the end, but the ultimate condition is far from being identical with the pristine one. With few exceptions we do not get a healing *together*, that is an adaptation and coalescence of the torn surfaces, but a healing *over*, that is to say, a torn surface forms an independent scar, and does not grow together with the corresponding surface on the other side.

The first paper I ever heard read in this Academy was one by Noeggerath on the primary operation for lacerated perineum. Then he stood alone, every speaker either declaring that perineal laceration was so rare that he never saw it, or deprecating immediate interference. All this has entirely changed since then. We all know that, to those who look for them, perineal lacerations are very common, and the many members of the American Gynecological Society who have written on the subject unanimously recommend the so-called primary operation, which means the insertion of sutures, so as to bring the torn surfaces together, immediately after or at least within twenty-four hours after delivery. Immediately after the tear has taken place the torn surfaces fit exactly to one another, and grow much more easily together than pared surfaces. A much smaller number of sutures are, therefore, required. Secondly, if only a partial success should be obtained, the great point is gained that the parts retain their normal shape and relations, so that a secondary operation becomes easier and has greater chances of being successful.

If the vulvar ring is torn behind, alone or conjointly with the vaginal ring, perineal sutures alone, and only from one to three in number, are required. If the anal ring is broken, too, it is best to insert a triangular row of sutures, following the outlines of the triangles which immediately after childbirth represent the perineal body. If the tear extends higher up into the vagina, vaginal sutures alone are placed in the septum above the perineal body. Tears through the anal ring are united with at least two rectal sutures, so as to bring the whole breadth of the torn ends of the sphincter well together. The central perineal rupture is brought together with deep perineal sutures. If the rima pudendi and the skin perineum are intact, there is, as stated above, great prospect of the parts uniting under the comparatively aseptic condition and the pressure ensured by a well-adapted perineal dressing.

Where no lesion is visible on the outer surface the friends of the patient may object to an operative interference the importance of which they do not understand. When circumstances are favorable some deep sutures may, however, be inserted from the vagina in such a way as to bring the edges of the rent in the vaginal ring together. The subcutaneous tear of the levator ani muscle might be treated in a similar way after cutting down upon it, but such an undertaking would probably meet with still greater opposition, not only from the public, but also from the profession. This accident is, therefore, left until bad consequences develop, and is then remedied by the secondary operation.

As I invariably stitch up tears involving the cutaneous part of the perineum immediately, and they always grow together under my antiseptic dressing, I have little personal experience with the so-called *intermediate operation*, which consists in attempting union at any time while the torn surfaces are granulating. I have, however, notes of a case occurring in September, 1882, before the new treatment was introduced into the Maternity Hospital, in which there was a tear through the whole perineum into the rectum, with incontinence of fæces. Three silk sutures were put in at the time of delivery, but no union took place. On the thirteenth day after confinement the granulating surfaces were scraped, dusted with iodoform, and brought together with three stitches, which led to a complete restoration of the perineal body. If, therefore, the primary operation has not been performed or has failed, and the case comes under observation in time, it is well worth while trying the intermediate operation.

If the torn parts have not been united by this or the primary operation, secondary operations are often required. There is a great variety of them, but the time allotted to me being spent, it is impossible to enter on a criticism of their respective values. I will only state which methods I prefer, because they have given me the best results. For incomplete perineal laceration, where the vaginal ring has not sustained much injury, Tait's flap operation is sufficient, and is an easy and expeditious operation, which with proper antiseptic precautions can hardly fail. For cystocele I use Sims's or Stolz's operations; for prolapse of the posterior vaginal wall, with or without rectocele, Hegar's colpo-perineorrhaphy, with slight modifications of my own, has

[1] Garrigues' Practical Guide in Antiseptic Midwifery; Detroit, Mich., 1886, p. 27.

given me most satisfactory results; and for the complete perineal laceration the same author's modification of the operation built up by many predecessors, using a trianglar row of sutures, has yielded excellent results at my hands.

TREATMENT OF THE UTERINE CAVITY IN ABORTIONS.[1]

BY H. C. CROWELL, M.D.,
OF KANSAS CITY, MO.

THOUGH the treatment of abortion is quite familiar to most practitioners, viewing it from their individual standpoint, it has appeared to me that there is yet room for discussion of some of the indications in such cases. In view of such a conclusion, as a result of some personal observation, I have undertaken to consider, briefly, certain indications which seem to me to be of practical importance, looking toward the most perfect result.

We will note primarily the physiological state of an impregnated uterus, and then the pathological, as I am disposed to consider it, in case of abortion. Then let us follow with some observation on the treatment as usually practised, noting some of the common results. Thus, considering the subject together I think that we may hope for new ideas and suggestions which may be of assistance to us in like cases.

It is not my intention to consider in detail the management of cases of abortion, but only that stage which comprehends the management of the uterine cavity following abortions. I realize full well that many very excellent authorities will not agree with me on every point, but in principle or theory I think there can be no variance, with our present understanding of processes and sequences. Since there *is* a possibility of difference of opinion, the object of this paper will be attained if it serves to awaken local observation and investigation, which will be of use to us now or in the near future.

The significance of abortions consist in their immediate and, more or less, remote effect upon the subject aborting. The immediate dangers are traumatism and hæmorrhage, either of the cervix or endometrium. The remote danger lies in resulting *endometritis*, *salpingitis*, *oöphoritis*, *sepsis*, pelvic inflammation, and sometimes pelvic abscess.

Martin says, and this is also in accordance with my own observation: "Chronic metritis occurs extraordinarily often after abortions, not only because the women do not take suitable care of themselves, since they (and some doctors) think that a pregnancy which is interrupted too early does not require the same attention as one that ends normally, but especially because this premature interruption of pregnancy is very frequently associated with insufficient evacuation of the cavity of the uterus, and permanent disturbance of the functions of the mucous membrane." Now, realizing the possibilities in a given case of abortion, it becomes evident that we should fully understand the process Nature requires to be fulfilled, and how the result is accomplished, and how we may best render assistance when it is required. We should also understand when Nature is able to effect the various steps necessary to a safe and perfect result.

By an abortion, then, we mean an expulsion of the contents of an impregnated uterus any time within the period of the first three or four months of impregnation. After this period, or during the fourth, fifth, sixth and seventh months, should such expulsion take place, we term it a miscarriage, and after the seventh month to full term it is called premature labor.

Now, in order that we may grasp the significance of abortion, as I have said, it will be necessary for us to familiarize ourselves with the physiological condition of the uterus after the ovum shall have entered its cavity, and, having done that, we can readily see the processes to be performed when, from any cause, the ovum shall be separated and expelled. It has been shown that the uterine mucosa, in way of preparation for the reception of the ovum, is thickened about ten-fold, becomes more vascular, and is thrown into numerous folds or convolutions, due to the increase of the cellular elements, this producing a soft, pulpy bed for the reception of the ovum. This soft, thick mucous membrane is known as the decidua vera. In this decidua vera lodges the ovum, and the surface under the ovum, made up of the decidua vera, is now known as the decidua serotina, and is the beginning of the *placenta*. Folds of the decidua vera grow up around the ovum, and finally meet and enclose it in a cavity of its own, shut off from the general cavity of the uterus. These folds of the decidua vera now become known as the decidua reflexa. During the first two months the fœtus is surrounded by a shaggy enveloping membrane, through which it draws its nourishment. At the end of this time this villous membrane becomes bald in its outer aspect down to the third of its surface, which lies most intimately attached to the uterine mucosa, and is now to be the placenta. Thus we see that a formed placenta does not exist until about the third month, or the termination of the period in which we may have an abortion.

The fœtal membrane or chorion is intimately applied to the maternal or decidual membrane. The decidua vera is not shed and expelled naturally in every case, until the term of gestation shall have expired, at which time it is thrown off by a very

[1] Read before the Kansas City Academy of Medicine.

moderate degree of contraction of the uterus, without much hæmorrhage (except when the placenta is attached) this constituting complete gestation and parturition. Now that the office of the decidua has been fulfilled, at full-term delivery, a new membrane is developed underneath, ready to supply the place of the old to be exfoliated, and this protects the intra-uterine muscles.

With this brief physiological examination of the processes taking place in the uterine mucous membrane during gestation, and especially in the early stages, we must be impressed with the fact that Nature has placed in the uterus a thickened membrane with certain offices to perform, requiring for their perfection the period of nine months, or a normal gestation; hence, whenever we have an abortion, from any cause whatever, we have a pathological condition to treat, and in this no more than in any other pathological condition can we leave it to Nature in every case; nor, on the other hand, can we profitably do that which shall defeat a natural or philosophical process. We must be impressed, it seems to me, that the treatment should be almost unanimous, or having the same end in view, viz.: the removal of the decidua, maintenance of perfect asepsis, and drainage. Now, when we shall have so treated a case as to fulfil these indications, we shall have done all that can be done in averting conditions of sepsis which are attended with serious results to the patients, in the shape of septic endometritis, metritis, salpingitis, abscess, etc.

Let us examine now some of the more common methods of treatment employed, and note the result in not a few cases. Perhaps the most orthodox plan of treatment in the majority of instances is, if the fœtus is expelled, to give ergot and retire. If the cervix is partially dilated, with the membranes protruding, ergot is given to expel them. If the cervix is not dilated, and an abortion is imminent, a tampon is used, if anything is done. When the fœtus is expelled a finger is introduced, and the clots and some of the membranes which are loose are cleaned away. A possible vaginal douche completes the antisepsis of the case. The patient gets ergot, and possibly quinine, for a few days until she recovers or develops a septicæmia, which sometimes receives the proper care and saves the patient; or she may go on and die, as do not a few every year.

Now let us see if there are not certain indications to be met in every case of evacuation of the uterus before the fourth month. We have seen the uterine mucosa developed into a thickened protective or receptacle, so to speak, destined to do a certain work for a certain period, viz., for nine months time, then to be exfoliated, being supplanted by a submucous membrane destined to replace the decidua. Such, however, is not the case in these earlier months, and yet a process of disintegration and shedding must take place, and a new membrane follow. This disintegration consists of a fatty degeneration, a dissolution and discharge, called the lochia. If, then, the uterine cavity is to be freed of its membrane, which has by the separation of the ovum been in a greater or less degree injured, we see as a first consideration the necessity of free drainage; hence we conclude that ergot, which causes uterine contractions and closure of the cervical canal, is contra-indicated. To me the rational plan would seem to consist in cleaning out the uterine cavity of all its contents at once—membranes of the embryo and decidual membrane of the uterus—thus removing the possible cause of sepsis, checking hæmorrhage, and facilitating early involution and a safe convalescence.

By the use of the dull curette, the os being freely dilated, the uterus should be cleaned perfectly, then swabbed out with pure carbolic acid or tincture of iodine, and ample drainage maintained by some means—my own preference being for iodoform gauze—leaving it in place for twenty-four or thirty-six hours, to be replaced after an intra-uterine douche of bichloride. Small doses of ergot and quinine, and possibly iron, may then be given to assist in the process of involution. I am convinced that when left to themselves these cases not infrequently, even when credited with making an unusually good recovery, go on to a state of ill health, though without symptoms which alarm or disturb the patient sufficiently to cause her to consult a physician. Perhaps the larger part of all cases of chronic tubal troubles date their bad feelings to the time of a previous abortion.

Miscarriage, or even parturition, may figure, as do these cases of abortion, in originating an endometritis, which travels up through the tubes to the ovaries, setting up a salpingitis, peri-oöphoritis, or peritonitis, with all their attending ills. One of these cases may run an insidious course without developing any *well-marked* pelvic peritonitis, and present a history something like this: Trouble with lower bowel, rectum, bladder, menstrual disorders, soreness, with indefinite pains, tenderness on palpation, etc. Colicky pains are common if salpingitis is present. These pains are sudden and lancinating, in the region of the tubes, or possibly in the hypogastrium; sometimes suddenly ceasing, followed by a discharge of more or less bloody, serous, or purulent material from the uterus, often thought by the patient to be leucorrhœal. These pains are not infrequently thought to be colic of the uterus; but with this history, if a vaginal examination is made, a small tumor will frequently be found on one or both sides. This same process of inflammation continues, and finally glues the fimbrated extremi-

ties together, causing sterility. Again, no appreciable amount of fluid may be contained in the tubes, and yet the inflammation may have caused a thickening of the coats of the tube (interstitial salpingitis), which can be detected through the vagina as a sore cord. These conditions are amenable to no other treatment, in by far the majority of cases, save the removal of the uterine appendages, which renders the woman incapable of performing her mission in its fullest capacity as a childbearing woman. Hence we see the very imperative demand for such prophylactic measures as shall forestall such disastrous results, which are obtained by antiseptic conditions of the uterine cavity at all timcs, and especially in cases of abortion, by rapid dilatation with steel dilators (not by tents), a thorough, carefully executed curretting, followed by systematic drainage until the uterine cavity shall have assumed a normal condition capable of taking care of itself.

Since writing this paper I have noticed a paper by Winter, of Berlin, in which, after analyzing 100 cases, he arrives at the conclusion that "the decidua vera can be left undisturbed—only loose shreds should be removed—as but nine patients completely shed the decidua; hence I feel warranted in assuming that safety to the patient demands the careful use of the curette to examine the uterine cavity, and if any decidual shreds remain (as I am confident they do in by far the greater percentage of cases) remove them. I consider the curette safer than the finger, and more effective. The results of retained decidual membranes may not be observed at once, but even at the end of one, two, or more years its effects will be noted upon the ovaries and tubes."

Finally, the conclusions at which I arrive may be summarized as follows, viz.:

1st. An abortion is a pathological process, involving the premature expulsion of the fœtus and membranes from the uterine cavity, which, normally, have an existence of nine months before they shall have completed their physiological intention.

2d. That such expulsion is generally incomplete when left to Nature, thus exposing the patient to subsequent pathological conditions or possibly death.

3d. That every case should receive a careful examination by the use of the blunt currette in preference to the finger, as it is safe, easier of introduction, and more effective.

4th. Complete removal of all membranes, maternal and fœtal, offers the greatest protection and safety to the patient.

5th. Perfect asepsis and drainage is a necessary supplement to the curette.

6th. Ergot has little or no effect in the treatment of cases of abortion. If used at all it should be in the late stages to assist involution.

PREVENTIVE MEDICINE AMONG THE WORKING CLASSES.

BY H. N. HALL, A.M., PH.D., M.D.,
OF CHICAGO

REALIZING that comparatively little is known by the American medical profession concerning the masses of poor foreigners who form so large a portion of our population, I feel that it might be interesting to look over a year's work among these people and the results obtained. It will be of special interest, inasmuch as the practice has been largely confined to the lower and poorer classes, who have apparently never sought a physician unless seriously ill, and then, in the majority of cases, consulting some native of their own country who has "come over" here and prefixed "Dr." to his name. We all know that the Government provides a service for the army and navy; that city governments provide a similar service for their police and firemen; while the railroads assess their employés in order that they may reap the benefits to be derived from this source; but it was not until last January that the attention of the manufacturer was called to this important matter.

In the fall of 1889, Mr. R. T. Crane, President of the Crane Company of Chicago, conceived the idea, in a charitable sense, of employing a physician and surgeon on a salary, to care for the 2000 to 3000 employés of his company, and on January 1, 1890, the service was inaugurated.

The following table will show the number of cases treated each month:

	Number of cases.	New cases.	Cases improved.	Cases same.	Chronic cases.	Sick men off.	Cases off.	SURGICAL CASES. Number of cases.	SURGICAL CASES. New cases.
Jan.	2041	1216	771	24	30	.....	58	159	82
Feb.	1325	695	585	23	22	263	8	136	54
March	1332	673	544	13	12	234	2	216	98
April	1310	834	355	16	5	124	...	379	89
May	1201	771	416	7	7	88	3	438	81
June	1391	905	471	2	7	117	14	525	117
July	1352	839	512	6	9	55	4	475	94
Aug.	1423	1107	304	4	8	28	...	531	106
Sept.	1648	851	782	3	5	46	1	654	129
Oct.	2055	1147	899	4	5	33	1	920	138
Nov.	1686	1117	563	5	2	38	2	729	140
Dec.	1927	1353	573	5	6	29	1	706	108
Total	18,691	11,508	6775	112	119	1055	94	5868	1236

Again, if we make quarterly enumerations in order that we may learn that period at which any one condition has been prevalent, we have the following:

	Jan., Feb., March.	April, May, June.	July, Aug. Sept.	Oct. Nov. Dec.	Totals.
Surgical cases	234	287	329	386	1236
Strains and sprains	57	197	181	133	568
Anæmia	34	44	27	52	157
Abscess	3	2	2	21	28
Amenorrhœa	5	21	2	24	52
Brass poisoning	5	31	...	12	48
Bronchitis	260	189	321	440	1110
Biliousness	136	221	282	321	960
Carbuncle	1	...	...	7	8
Catarrh	13	16	11	40	80
Constipation	130	196	189	236	751
Consumption	18	19	1	15	53
Diarrhœa and dysentery	166	206	447	163	928
Dysmenorrhœa	7	6	3	40	56
Dyspepsia	69	148	298	258	773
Dropsy	...	...	2	12	14
Diseases of blood	11	45	19	43	118
" " ear	7	6	8	11	32
" " eye	18	31	46	72	167
" " heart	13	11	11	22	57
" " kidney	26	32	35	36	129
" " nose	...	...	2	2	4
" " skin	40	73	66	105	284
Epilepsy	...	...	3	3	6
Erysipelas	1	5	...	9	15
Faruncle	9	22	34	87	152
Felon	4	2	...	13	19
Goitre	...	...	...	7	7
Heat apoplexy	...	71	36	4	111
Headaches (female)	91	83	32	...	206
Influenza	927	101	...	170	1200
Lead poisoning	1	...	...	3	4
Lumbago	2	12	1	49	64
Malaria	38	53	121	142	354
Nervous diseases	11	5	...	...	16
Neuralgia	11	53	64	72	200
Paralysis	...	...	1	1	2
Piles	8	26	32	24	90
Pneumonitis	13	25	14	32	84
Pleurisy	...	13	6	6	25
Rheumatism	55	62	68	120	305
Rupture	3	6	11	17	37
Sarcocele	2	3	3	10	18
Sciatica	2	4	...	6	12
Septicæmia	1	3	4	11	19
Tonsillitis	136	70	35	243	484
Typhoid condition	6	61	17	37	121
Ulcers	1	20	13	30	64
Venereal	7	26	15	60	108
Worms	...	3	5	10	18
Total	2584	2510	2797	3617	11,508

Of these employés 200 are girls, whose ages average sixteen years. Some 800 are boys between the ages of fourteen and twenty years, while probably four-fifths of the entire number are either foreigners or are born of foreign parents. Of these we find that the machinists and well-paid mechanics are Germans, Norwegians, and Swedes. The mechanical workers, that is those who feed automatic machines, are Irish and Norwegian lads; while the moulders and laboring men, such as helpers, truckers, etc., are principally Poles, Bohemians, and Jews of all types, among whom are many Russians.

It might be well to explain that our object has been to *prevent* rather than *cure*, and that this plan has been very successful is demonstrated in the column of "sick men off." In January there were probably 400 men reported as sick at home, but as this excessive number was due to the epidemic of influenza, we will leave this item and begin with February, when there were 263 men who were reported as having lost at least half a day on account of sickness.

This number has been gradually reduced until June, when, on account of the excessive heat of that month, as well as from the influence of whiskey and immense quantities of beer consumed by these men, we find that there were 117 men at home sick. It might be interesting to state that many of these men who work at the furnaces at a temperature of about 140° F. have an idea that the more whiskey a man drinks the better he can stand the intense heat; but we know that the temperate man is seldom affected by the heat. From June the figures vary but very little in their downward course, and in December we see a very flattering result, namely, only 29 men reported as having lost any time at all on account of sickness. These results seem to demonstrate practically that after all *preventive medicine* is very beneficial to the poor man, who cannot afford to be sick, and who, on account of his surroundings, is far more liable to all the diseases to which flesh is heir than a more prosperous fellow-being who can afford a small house or several rooms in a clean and healthy neighborhood, rather than share the same quarters with many families in possibly a basement in some wretchedly unhealthy locality.

It should be explained that only 94 of these 1055 cases applied to us for medicine; the balance of the number were either taken sick at night or at a time when they could not find the company's physician, or some possibly felt that their ill feelings would not amount to anything and that they would be themselves again on the morrow, while many others, decided followers of fatalism, believed that if a man was destined to be sick he must be so, and that the "old fogyism," "a stitch in time saves nine," was a most atrocious fallacy. However, we find that of 11,508 different cases seen, only 94 have lost any time at all on account of the condition for which they received treatment—which proves conclusively that the old adage applies as well to medicine as it does to the chain-stitch seam of a man's trousers.

It will be noticed that the chronic cases have also been reduced in number. We find that the surgical cases required about five dressings each, while each medical case consulted us nearly twice.

In looking over the tables we find that the surgical cases, which have been principally of a minor nature, have increased during the latter part of the year, when the days have grown dark early and when the men have been rushed with their work. A natural result is that we have many fingers caught in the gearing, giving us badly lacerated members; but

very few of these, with conservative surgery, have required amputation.

Another common accident results from a boy's trying to shift a belt with his hand, when suddenly his arm is pulled under the drum. From this cause we have had four cases of inter-condyloid fracture. Two cases of fracture of the olecranon were the result of "sliding bases" when indulging in base-ball. In these cases, the feet being pushed forward, the weight of the body was thrown upon the hand, with the above result.

In order to protect the firm, a factory surgeon should be a strong believer in conservative surgery, and should refrain from doing any amputation, except as a very last resort, for upon the slightest provocation, even the loss of a finger-tip, whether the result of his own carelessness or not, the man will sue the company for heavy damages, and in many cases the jury, whose sympathy is always with the man, will return an unfair verdict against the company. There was one case last year which will illustrate the desire which many men have for an opportunity of suing a company. A man, after informing a fellow-workman of his intention, walked deliberately over to a very heavy machine, thrust his hand into the gearing, and had the member taken off at the wrist. The testimony, however, was so very much against him that his attorney advised him to refrain from instigating any damage suits against the concern.

There were two cases of fractured ribs, the result of muscular action, both cases being in blacksmiths. There have been a great many cases of burns from molten brass and iron, caused by a man's pouring the hot metal into his shoe or by the presence of water in the mould, when an explosion will occur and the metal flies in every direction.

In all of these cases nothing has given such universally good results and speedy recovery as cleansing the wound with liquid vaseline or olive oil and then dressing the surface with bismuth subnitrate. In fact, so very satisfactory have been the results accomplished with this agent that it has been used as a dressing in a large proportion of my surgical cases in preference to iodoform. It is a good antiseptic, an astringent, is cheap, and above all is odorless.

Pyoktanin has been relied upon in cases of ulcers or injuries and burns of the eye, but in general the results have not been sufficiently successful to warrant its universal use.

Aristol I have used in chronic ulcers with good results.

The strains and sprains are conspicuous during those periods when the men are out of doors indulging in sports, base-ball, wrestling, etc.

The anæmia, as would be supposed, was found principally among young girls and boys, who did not have sufficient strength to accomplish the work they had undertaken.

Amenorrhœa is found among the youngest girls. It seems rather strange that, although these girls are associated intimately with men of all classes, and are subjected to vice, licentiousness, the influence of cheap theatres, etc., they should menstruate so late in life, the majority being sixteen and seventeen years of age before the function is properly established.

Brass poisoning is conspicuous during the warm spring months, when the system seems rather run down after a hard winter, when the pores of the skin begin to open.

This condition is nicely controlled by nitro-muriatic acid. I do not pretend to know what the exact chemical action is, and it was only by accident—as, though we are loth to admit it, most discoveries are made—that I learned of its virtue. Early in the year a man in the brass foundry came to me with what I considered chronic dyspepsia. His troubles were confined to his stomach, where he complained of pains, etc.—though many of the men complain of pain in the chest, and some of them even have green hair. I put all these men on the strong acid with very gratifying results. The first man gained nine pounds in one week and claimed that he felt very well.

The fumes which the men inhale contain oxide of lime, antimony, and iron, about 40 per cent. pure copper, 5 per cent. arsenious acid, 10 to 15 per cent. sulphur, 15 to 20 per cent. sulphuric and sulphurous acid in combination, and 14 to 19 per cent. of water.

Diarrhœa and dysentery are conspicuous during the third period, although, on account of bad food, poor surroundings, meagre clothing, etc., these conditions are prevalent during the entire year.

The kidney troubles include nearly every affection that is common to that organ, and in the majority of cases the disease is the result, either directly or indirectly, of alcohol.

Skin affections result especially from the irritation caused by fine particles of brass lodging on the surface of the body or upon the action of the corrosive fumes arising from the hot metal.

There have been 7 cases of goitre under treatment during the last quarter; 3 of these cases (nearly 50 per cent.) succumbed to inunctions of a 20-per-cent. ointment of aristol, while 3 more were obstinate, refusing to disappear until 20-per-cent. solutions of carbolic acid were injected into the tumor three times weekly; the seventh case was so very obstinate that it was not at all influenced by these two agents, and not until electrolysis was resorted to did it disappear. There are, however,

very few cases which cannot be controlled by carbolic acid. It has proven an excellent remedy in our hands.

During the epidemic of influenza I found nothing which gave such immediate and permanent relief as *antifebrin* given in three-grain doses in hot whiskey, after dinner and supper and on going to bed.

Of 720 cases of that form of influenza known as "la grippe" under treatment last January, only 54 of this number lost any time on account of sickness at home. Of course, the antifebrin controlled only the nervous, febrile, and painful symptoms. The gastric form of the condition received in addition symptomatic treatment. Antifebrin has been used extensively in headaches of the girls, and although they have continued at their work, running in and out of *hot ovens* after taking the drug, there have been no evil results whatever.

Malaria and rheumatism are prevalent at all times, but conspicuously so during damp weather.

Nothing has given such good results in cases of bleeding piles as twenty-five-grain doses of powdered ipecac, repeated once or twice.

Typhoid fever and cases bordering on this condition are especially prevalent among the poor foreigners, who live huddled together like so many sheep, and from this cause we have had several deaths.

As a cause for all these conditions three influences are predominant:

Preëminently causation is due to the home surroundings, social habits, and alcohol.

Secondly, and as aggravative of the conditions arising from the above causes, are the climatic influences, and lastly, the industrial surroundings—to which latter influence can only be attributed the surgical cases and conditions which are peculiar to the men's occupation, such as nephritis and paralysis among the lead-workers, bronchial affections among the polishers and grinders, and gastritis among the brass-workers. To climatic and social influences can be attributed the majority of the conditions enumerated in the tables.

For instance, we find in a great measure that diseases analogous in their general characteristics group themselves singularly together at special periods, as if the result of fixed physical and chemical laws. During cold weather such conditions as bronchitis, influenza (colds), tonsillitis, all respiratory affections, are prevalent; while during the hot weather there are grouped together those diseases whose essential symptoms are exudations from intestinal surfaces or from the liver.

There cannot be a more worthy charity which a manufacturer can bestow upon poor mechanics and laborers than to provide somebody who will care for him when disabled by sickness. Most of these men have large families, who consume every penny long before it is earned, and naturally the man has very little money to spend for a physician's services or medicines; and even if he should do so, the quality of both, which he could procure in his immediate neighborhood, would be questionable.

Looking at the subject in another light, there are *very few* investments that will net a manufacturer greater returns than a medical service among his men; and, after all, why should not a manufacturer devote such sums as he may feel disposed to give to charity to his own men, who really earn the money, rather than lavish it upon the many so-called "charities" to which he is always expected to contribute?

State and Ontario Sts., Chicago.

CLINICAL SUGGESTIONS FROM CASES OF "LA GRIPPE."

By SAMUEL S. WALLIAN, A.M., M.D.,
of New York.

Ignoring the question of the nature and etiology of this prevalent and somewhat treacherous malady, whether of zymotic or telluric origin, a specific germ disease or an epidemic influenza, of an unusual and unaccountable type, the characteristic, persistent and decidedly serious complications and sequelæ of "la grippe" make its clinical study a matter of intense and immediate importance to every physician, as well as to every inhabitant of the country.

In most of the larger cities, as well as in the rural communities, it is at this moment epidemic, and is sending the death-rate to a figure which may well be a cause of alarm to the most conservative and indifferent of the profession.

It would be preposterous to assume that the rapidly increasing death-rate from pneumonia and other sudden and fatal forms of respiratory disease, from "heart failure"—which has become a popular as well as a professional fad—and from the various other manifestations of a condition of general vital prostration, which follow so closely in the wake of this prevailing malady, are attributable to an old-fashioned influenza, or periodical and rather eccentric "bad cold," which is to be annually expected and combated.

At the first announcement of the scourge it was greeted by the press and the public with a good deal of badinage and an effort at grim humor. It was presumed to be a rather disagreeable but comparatively harmless Russian joke, and the daily press found in it a stock source of humorous sarcasm. All this is changed. Funeral notices have crowded out the funny corner, and the question of how to

cope with the new foe to life is now admitted to be of the most serious importance.

The vital point is not so much as to technical origin and microscopical curiosities of the disease, but *what shall we do for our patients?*

The nostrum venders are reaping a rich harvest, measured in dollars, by proclaiming loudly that each of their mixtures, from Ayer's Pectoral and Antipyrine to Scott's Emulsion, is a specific for the disease. No doubt, hundreds of cases have been aggravated, or made unnecessarily fatal, by indiscriminate drugging, under the direction of domestic advisers and reckless counter-prescriptions. Nor has this ill-advised drugging been limited to the laity and the unscrupulous pharmacist. Routinists in the profession have done their share, have relied on those fatal make-shifts, the anodynes and antipyretics, and as a result have inexcusably swelled the death-rate, while adding nothing to our knowledge of the pathology or therapeutics of the disease. For this reason many of those who have treated a large number of cases have nothing of value to offer as a result of their experience. As is true in all new or uncommon manifestations of disease, better half a dozen cases in the hands of a thinker than a thousand under the monotonous *régime* of the mere routinist.

From the loaded condition of all the secretions it is evident in these cases that the blood is from some cause seriously poisoned. Whether that poison is produced by a microbe inhaled from the air—a mode of accounting for otherwise quite unaccountable diseases and infections now quite in vogue—or is absorbed from some other source, may some time be demonstrated. The first indication is prompt and efficient elimination by every available channel. Purgation is hardly allowable, in view of the extreme prostration which is so common a feature. Diuretics are both uncertain and inefficient, although they may sometimes be found auxiliary to other measures. The skin and lungs are unquestionably the most efficient organs through which to operate. In case of robust patients, an efficiently managed Turkish or Turko-Russian bath at the outset is one of the promptest measures at command. It relieves congestions, causes rapid elimination, and equalizes the circulation better than any measure I have tried. Few patients are too weak to bear this measure, if it be intelligently adapted to each individual case. When for any reason it is not available, I substitute the full hot bath, and direct that this shall be as hot as can well be borne for five or ten minutes, after which the temperature may be reduced, or the extra hot immersion may be followed by a momentary shower of quite cool water. To the hot bath, as a detergent, I add bicarbonate of potash or soda, or, preferably, refined borax and aqua ammonia, or eau de Cologne, which makes it both stimulating and refreshing. If the shower be omitted it should be replaced by a rapid splash, or hand-douche of cool, but not shockingly cold, water—which latter is too often heroically advised.

This is to be followed by a thorough and free use of measures which directly facilitate oxidation of the morbid elements existing—whether *absorbed* or *developed* we need not stop to inquire—in the blood. First of all, place the patient in a large, airy, and well-ventilated room. See to it that the room is not crowded with upholstery—thick, fluffy curtains, plush furniture, and heavy, absorbent carpets. It would be well to observe all the precautions which are deemed desirable in case of the more decidedly infectious disease. The readiest method of disinfecting and rendering the sick-room aseptic is by means of peroxide of hydrogen, which is to be thoroughly sprayed about the room every two or three hours. Simple as the process is, it becomes a most valuable adjunct to other measures. It not only disinfects in a most natural and efficient manner, it also liberates free oxygen in an extremely active or ozonized condition, and thus directly contributes toward the main object. Any good hand atomizer, which has either glass or hard-rubber tubes, will answer the purpose. Metal tubes are not allowable in connection with the peroxide. In extreme cases a constant spray of peroxide solution (10 to 15 vols.) may be kept up by means of any good nebulizer attached to an air-receiver, worked by a hand-pump.

Add to this free and frequent inhalations of pure oxygen, to the extent of from 15 to 25 gallons per diem. See to it that these inhalations are properly performed, and not left to the careless and inefficient manipulation of an inexperienced nurse or other attendant. To prevent sequelæ, these inhalations should be kept up for a week or two after convalescence has fairly set in. Oxygen will be found to do efficient service in restoring tone to the impoverished blood, and through this to the entire vital organization. It promotes digestion and assimilation, and has no possible drawbacks to its free and persistent use. Sometimes this method, the inhalation of this gas, proves ineffectual—as from the abnormal condition of the respiratory mucous membrane, coupled with imperfect inspiratory efforts on the part of the patient. In these cases it will be amply worth while to take the trouble to administer the gas *per rectum*, or, after Valenzuela, hypodermically. By either of these methods it is quite promptly absorbed, and soon shows its good effects.

181 ST STREET AND FORT WASHINGTON AVENUE.

CLINICAL MEMORANDA.

MEDICAL.

A Reliable Purgative Enema.—The following enema has proved so reliable and satisfactory in my hands, that I feel it is worthy of a brief note:

℞.—Sulphate of magnesia . . 2 ounces.
Glycerin . . . . 2 "
Oil of turpentine . . ½ ounce.
Water . . . . . 2 ounces.—M.

Label, "To be used as an enema."

To move the bowels after abdominal section or after plastic operations on the female pelvic organs, it has been in constant use for many months. When used alone it has moved the bowels, as a rule, promptly; and has been equally effective when given as an adjuvant to some cathartic taken by the mouth.

Prior to the employment of this formula, I had used the simple enema of glycerin, and of glycerin and turpentine, which are distinctly inferior to the one above recommended.

The combined action of Epsom salts, turpentine, and glycerin is very effectual, not only in evacuating the rectum, but also in getting rid of flatus, the presence of which in the bowels is the cause of much of the pain present after abdominal section.

I have had the opportunity, upon two occasions, of testing the activity of this enema in cases of threatened obstruction of the bowels following operation. Other measures failing—including purgatives and large and small enemata—I have introduced a long, soft tube up the rectum, and given this enema into the descending colon, with the happiest results.

Now that the use of opium is banished from the after-treatment of cases of abdominal section, this enema has, in my hands, become the great anodyne—which fact is quickly realized by patients, who demand its frequent use.

When given through the rectal tube, its employment promises much in cases of partial obstruction of the bowels, and also in cases of obstruction due to paralysis of the bowel.

The enema is given best through a hard-rubber piston syringe.

Charles P. Noble, M.D.

Philadelphia.

Purpura Hæmorrhagica: with a Report of Two Cases.—These two cases are exactly opposite in their nature. Through the kindness of Dr. M. D. Ellison, of Canisteo, N. Y., I was allowed to see the following case:

Case I.—Mrs. S., aged thirty-three years, married, and had given birth to three children, two of whom are living, the elder being ten years of age. I saw the patient June 26, 1890, in the fourth month of her pregnancy. She was anæmic and poorly nourished, and complained of a great deal of pain in her limbs. There were a few purpuric spots on the forearms and legs, which seemed very sore. The patient was put on a nutritious diet and in good hygienic surroundings. Small doses of fluid extract of ergot, tincture of the chloride of iron, quinine, and dilute sulphuric acid were given, and a bath of alum and alcohol ordered. The hæmorrhagic spots were not constant, the old ones being absorbed and new ones appearing. The disease did not seem to be influenced by treatment, symptoms of cerebral anæmia developed, and the patient died July 3, 1890. There was no hæmorrhage from the mucous membranes.

Case II.—Willis S., aged two and a half years; apparently in good health; family history good, with the exception of an aunt on the mother's side, who died with a similar affection. When the child was weaned from the breast it was fed with milk from a farrow cow and suffered from indigestion for a period of six months; but when the milk was changed the child grew healthy and strong.

I was called at 4 P. M. on December 30, 1890, to see the boy. A history was given of a feeling of malaise for several days, the child being bright and playful in the morning, but during the afternoon would get tired, feverish, and fretful. He presented a slight hæmorrhagic spot at the femoral opening on left thigh about the size of a silver half-dollar.

I saw patient again at 7 P. M. and found that the spot had become larger, and in addition there were other hæmorrhagic spots on the inside of thighs and calves of the legs, which established a diagnosis. He was given ergot and iron up to the point of tolerance, was kept cool, and astringent washes were used. Stimulants and a most nutritious diet proved of no avail; the hæmorrhage continued, and the little fellow died at 11 A. M. the next day. The bleeding was confined entirely to the lower extremities, which were filled until they were hard with blood.

"Bled to death," we say, and yet not one drop of blood was visible outside the body.

If someone could devise a method whereby we could recognize the premonitory symptoms of this fatal form of the disease and establish a prophylactic form of treatment, it seems to me it would be a great achievement.

Case I., I am told, aborted a few hours before death and suffered much.

Case II. died without pain, and the mind was clear up to the last few minutes.

Roy Dunham, M.D.

Greenwood, N. Y.

Influenza.—During the present epidemic of influenza I find, as an antipyretic and analgesic, nothing better than phenacetine, or phenacetine and salol in combination. With very few exceptions, the temperature has been lowered and the pain greatly relieved after the administration of ten grains of phenacetine, or five grains of phenacetine and five of salol, followed by five grains of phenacetine, or two and a half grains each of salol and phenacetine every three hours. I usually give this for twenty-four hours, rarely finding it necessary after that time.

C. Emmerling.

Pittsburg, Pa.

PATHOLOGICAL.

A Case of Abscess of the Liver Opening into a Bronchus.—Adam R., aged thirty-four years, single, born in Germany, a farm hand, was admitted to the Episcopal Hospital under Dr. Caspar Morris's care August 9, 1890.

Present illness began with an attack of dysentery one year ago last May; he has since had frequent lancinating pains over the hepatic region, and during the summer appeared to have suffered from irregular chills, fever, and night-sweats. Several months ago he noticed that his feet and legs were somewhat œdematous, and they have remained so. Upon his admission patient was very thin, and presented a peculiar, sallow, earthy appearance; conjunctivæ faintly yellowish, and the lancinating pains were still complained of.

Examination of heart and lungs was negative. Abdomen slightly bulging in the right hypochondrium, and there was marked tenderness to touch over the whole hepatic region. The liver dulness was eight inches in mammary, two and a half inches in median, and five and three-quarters inches in axillary line. Abscess of the liver was suspected, but fluctuation could not be made out.

On October 11th intense pain was complained of over the sixth right interspace, with sharp pricking sensations in epigastrium and right hypochondrium. On the 14th the pain was in the tenth space in the axillary region, and much aggravated by pressure. Urine gave no trace of albumin with heat and nitric acid test, but well-defined ring with tannic acid. Peptones 0.24. Spleen enlarged, measuring six inches vertically and about four transversely. Posteriorly the liver dulness measured seven inches, and anteriorly the dulness extended almost to the umbilicus. Great pain was referred to the free end of twelfth rib.

On November 23d there was diarrhœa with mucous and bloody stools. The pulse was irregular and intermittent. Estimated red blood-corpuscles at 3,262,000. White corpuscles not markedly in excess of normal.

On December 1st had slight cough attended with mucous expectoration, which on the 6th was much increased, and accompanied by free expectoration of brownish (blood-stained) sputa. With hypodermic needle I punctured the upper portion of the region that was found to be dull on percussion, and drew off some purulent matter and examined for bacilli, but found none present.

On December 12th he expectorated about eight ounces of greenish-brown matter. The patient was very weak with an intermittent pulse and complete anorexia. Death occurred on this day from exhaustion.

Autopsy: Body extremely emaciated. Anterior border of liver extends below umbilicus. Numerous firm adhesions between liver, diaphragm, and right kidney. The right lung also bound down firmly to diaphragm, and in trying to separate these adhesions a large abscess cavity was opened in the upper posterior portion of the right lobe, which was found to contain about a quart of foul-smelling pus. Only about half an inch of sound liver tissue remained at the upper posterior portion of the right lobe, bridging over the abscess cavity. The walls of the cavity were composed of shreddy false membrane and covered with much recent lymph, but a complete cicatrization had not occurred, though in places a smooth wall of protecting lymph had been formed. A fistulous communication was discovered passing from the abscess cavity through the diaphragm into one of the bronchi near the lower border of the lower lobe of the right lung. A small quantity of pus escaped from the cut end of the trachea. The *lungs* were emphysematous, and the right lung, particularly, a good deal congested, but it showed no signs of pneumonic infiltration. The *spleen* weighed twelve and a half ounces; irregularly lobulated. *Right kidney* firmly imbedded in false membranes and attached to lower border of liver; appeared fatty. *Heart* dilated; right auricle contained a large currant-jelly-like clot; left ventricle dilated and contained a large clot. Numerous ulcers in rectum and descending colon, dysenteric in type.

Though the diagnosis in this case had been pretty well established some weeks before the patient's death, the ignorance of the seat of the suspected purulent accumulation in the liver deterred me from advising a free opening. One or more exploratory punctures should have been made and the seat of the accumulation in this way determined, and it is possible that if this had been done soon after I first saw the patient in October, and free opening made and good drainage secured, his life might have been prolonged. An interesting feature of the case was the almost entire absence of fever, at least during the last month or two of patient's life. His appetite was unimpaired until within a very short time of his death.

HENRY M. FISHER, M.D.

MEDICAL PROGRESS.

Ipecacuanha to Increase Labor Pains.—DRAPES (*Les Nouv. Remèd.*) affirms that ipecac, in the form of wine of ipecac, in the dose of ten to fifteen drops, repeated every ten minutes, constitutes a powerful remedy to provoke strong contractions of the uterus in a case of uterine inertia or rigidity of the cervix, which threatens to indefinitely prolong the labor. After the second or third dose strong uterine contractions will come on, will repeat themselves at regular intervals, and tend to rapidly bring the labor to an end. That which makes ipecac in this condition superior to ergot of rye is that it never provokes tetanic contraction of the uterus, so frequent after the administration of ergot.

The Action of Hydrastin upon the Vascular System and the Uterus.—Authorities are divided upon the mode of the action of hydrastin on the vascular system. Some have observed an increased blood-pressure and slowing of the heart's action, whilst others affirm that the drug paralyzes the vascular system. The uterine contractions provoked by hydrastin are due, according to some, to the direct stimulation of the muscles and of the cardiac nerves; according to others, to the stimulation of the central nervous system. It was for this reason that Serdtseff had undertaken new experimental researches upon frogs (sixty-two experiments) and upon warm-blooded animals (fifty-seven experiments). These are the results obtained by this experimenter:

Given in a small dose hydrastin provoked, in frogs and in warm-blooded animals, slowing of the heart's movements, owing to a stimulation of the inhibitory apparatus, both peripheral and central. Small doses always increased blood-pressure; by larger doses it was lowered.

These differences depended upon the state of the vasomotor centre. Small doses were not followed by convulsions, and did not paralyze either the respiration

or the heart. He thinks, then, that if some observers have verified the paralyzing action of hydrastin upon the vascular system, it must be those who have given larger doses of the remedy. Regarding the influence exercised by hydrastin upon the uterus, the voluntary or rhythmic contractions of this organ would be increased in their strength, their number, and their duration.

Hydrastin does not act *directly* upon the neuro-muscular apparatus of the uterus, but *indirectly* by the intervention of the central nervous system, and that very probably by way of the vasomotors.

In sustaining these obtained results the experimenter counsels the use of hydrastin in all those cases of hæmorrhage where it would be, for one cause or another, unwise to await strong contractions of the uterine muscles, and where, in consequence, it is of the greatest importance to attack the bleeding through the vessels of the uterus.—*Les Nouveaux Remèdes*, February 24, 1891.

Treatment of Convulsive Tic.—Krueger is reported in *La Semaine Médicale* to have cured a case of bilateral convulsive tic, probably due to exposure to cold, and occurring in a young girl of a non-hysterical temperament in the following manner: After the disease had proved itself very obstinate, resisting for three weeks the bromides and valerianates, relief was finally obtained, both rapidly and completely, by the use of very hot poultices applied to the face, upon both sides, until profuse local perspiration was developed.

Atropine for Paralysis Agitans.—Moretti has treated three cases of paralysis agitans by hypodermic injections of atropine. The results obtained were very encouraging. He commenced the treatment by the injection of $\frac{1}{100}$th of a grain, and progressively increased the dose until $\frac{1}{50}$th of a grain was taken each day, divided into two injections.

Gargle for Acute Tonsillitis.—

℞.—Ammoniated tincture of guaiac, Compound tincture of cinchona } of each 6 drachms.
Chlorate of potassium . . 2 "
Honey . . . . . 6 "
Powdered gum arabic a sufficient quantity.
Distilled water enough to make 4 ounces.

From one-half to one teaspoonful of this should be used as a gargle in a little water every two or three hours.—*Journal de Médecine de Paris.*

A Gargle for the Relief of Fœtid Breath.—The *Revue Générale de Clinique et de Thérapeutique* gives the following prescription for the relief of this condition:

℞.—Saccharine, Salicylic acid, Bicarbonate of sodium } of each 15 grains.
Alcohol . . . . . 1 ounce.
Essence of peppermint . . 10 drops.

A teaspoonful of this is to be placed in a wineglassful of hot water, and used as a gargle once or twice daily.

The Treatment of Pulmonary Tuberculosis by Hypodermic Injections of Iodoform.—Gavoy, in the *Gazette Médicale de Paris*, details his method of treating pulmonary tuberculosis with iodoform. Morning and night, a hypodermic injection of 30 minims of the solution, of 1 part to 100 of iodoform in oil of sweet almonds, is given.

No febrile reaction occurs, and the results are very good. The cough diminishes rapidly, and the characteristic muco-purulent catarrh first becomes more liquid and then ceases. The character of the voice is also improved, and the lung becomes more permeable to the air. Inspiration is increased in depth, and the râles become more moist. Other symptoms showing the favorable influence of this treatment are a decrease in the night-sweats and a renewal of the appetite. The therapeutic influence of iodoform over carious bone and pus-corpuscles seems to point to the fact that it exercises an analogous action upon tubercular processes accompanied by resolution and necrosis of the lung.

Antipyrine in the Treatment of Gonorrhœa.—In the *Revue Générale de Clinique et de Thérapeutique* it is stated that Brindisi employs the following solution as an antiseptic lotion in the treatment of gonorrhœa:

℞.—Antipyrine . . . . 45 grains.
Sulphate of zinc . . . 4 "
Rose water, Cherry-laurel water } of each 2 ounces.

Label, "To be used as an injection."

Prescription for Tetanus.—*La Semaine Médicale* states that Mayer employs the following prescription in the treatment of tetanus:

℞.—Hydrochlorate of morphine . ⅙ grain.
Chloral . . . . . 15 grains.
Bromide of sodium . . . 20 "

Make into one powder, which should be wrapped in waxed paper; give from three to six of these powders each day.

Injection for Tubercular Diarrhœa.—

℞.—Olive oil . . . . . 6 drachms.
Guaiacol . . . . . 10 drops.
Water . . . . . 8 ounces.
1 yelk of an egg.

This injection is recommended for cases of tubercular diarrhœa.—*Journal de Médecine de Paris.*

Prescription for Rhachitis.—In the *Journal de Médecine de Paris* the following prescription is given for the treatment of rhachitis:

℞.—Phosphorus . . . . 1 grain.
Absolute alcohol . . . 5 drachms.
Spirits of peppermint . . 30 drops.
Glycerin . . . . . 2 ounces.

Six drops of this mixture may be given in water three times a day, and after the lapse of one week another drop may be added.

CURRENT LITERATURE.

SATURDAY, APRIL 25, 1891.

PYOKTANIN.

DR. O. WANSCHER refers to Professor Stilling's paper, in which the latter called attention to the antiseptic properties of the aniline dyes and named them pyoktanin, from their pus-killing properties. Experiments with the aniline dyes are now justifiable, for Merck has produced a non-poisonous aniline which can be given in doses of 15 grains to dogs, with no result other than to stain their fæces blue.

Wanscher confirms Stilling's statements regarding the pus-destroying properties of pyoktanin, but he is not certain that the good result following its use in two cases each of iritis and of choroiditis are to be ascribed to the antiphlogistic power of the pyoktanin. On the other hand, Carl and Braunschweig have disputed its antiphlogistic power, and also claim that it caused severe pain, shooting into the brow and the temple, and that great irritation with croupous exudate occurred upon the ocular conjunctiva after its use. Wanscher thinks these statements unjustified. He has found in a one-per-cent. solution of blue pyoktanin (methyl violet) an agent which fulfils the desire expressed by Billroth for a stain which will find and destroy its own peculiar bacteria without injuring the tissues. The results of Carl and Braunschweig he attributes in part to improper use of the stain. The pyoktanin, to be effective, must seek out the bacteria in the tissues; hence, it must be dissolved, clear, and easily absorbed. The more granular it is the more difficult will absorption be. Moreover, the application must be so made that no danger is incurred of transferring any pyoktanin from one patient to another, which can easily happen if the same brush is used for several patients. Pyoktanin in a half-dried condition destroys the bacteria of pus, but not those of croup and diphtheria. Possibly the semi-dried mass is irritating, just as powdered chlorate of potash acts as an escharotic, while a concentrated solution has no such action. Again, the pyoktanin must be employed repeatedly until the tissues are effectually stained. To this end ten or twenty drops at a sitting are often necessary, and they must be instilled every two or three hours, according to circumstances. Carl discards it as ineffective because he did not succeed in checking a serpiginous ulcer by using one drop a day.

For six weeks, Wanscher says, he instilled pyoktanin (blue and yellow) in nearly every case that applied. Fifty patients received upward of a thousand instillations. About twenty patients came daily to his clinic, instillations being employed generally four times a day; altogether there were three hundred instillations a day. He says in no case did he see irritation follow. None of his patients have complained of pain; and, on the other hand, he says he has undoubtedly rescued three eyes which would have been lost through gonorrhœa, and two others have recovered from it with full vision. Braunschweig has treated seventy patients with pyoktanin in two months, but it was not employed in a case of gonorrhœa. Wanscher reports his four cases in detail.

Besides the cases of gonorrhœa, he has treated by instillation of a one-per-cent solution of pyoktanin two cases of cataract operation, four iridectomies, one squint operation, one case of gonorrhœa of the lachrymal sac, two cases of specific choroiditis, one of simple iritis, two of suppurative conjunctivitis, superficial keratitis, etc. The result in these and in other eye and surgical cases in private practice has confirmed his good opinion of pyoktanin, especially of the blue pyoktanin.

In his private practice he says he has cured a gonorrhœa of the lachrymal sac which had persisted a year under other methods of treatment, even including galvanic stimulation of the mucous membrane of the canal. He has also employed it in the dressing after operation of a case of osteitis and necrosis of the tibia which had lasted twenty-five years. The result was favorable, and no irritation was produced. A walking case of gonorrhœa, associated with great dysuria, was abated with a one-per-cent. solution of pyoktanin. The same result was obtained in a case of balano-posthitis. A good result was also obtained in a case of ingrowing nail and inflamed corn. After operation a bandage soaked in a one-per-cent. solution was applied. The wound healed in a few days, notwithstanding the fact that the patient continued to go about.

Wanscher finds yellow pyoktanin less active than the blue. The color disappears quickly when used upon the eye, but more slowly when used upon the skin. Alcohol quickly dissolves the fresh stain.

In conclusion, he speaks of a one-per-cent. solution of blue pyoktanin as one of the most valuable of our therapeutic remedies for use in purulent ophthalmia.—*Therapeutische Monatshefte*, February, 1891.

ANTISEPTIC ACCOUCHEMENT.

IN the *Journal de Médecine* for February 25, 1891, LUCAS-CHAMPIONNIÈRE furnishes a condensation of the various antiseptic precautions observed in the different French maternities. In the service of Professor Pinard in the Baudeloque clinic, care is taken to clean the waiting wards daily with pieces of linen cloth moistened in a solution of the biniodide of mercury of the strength of 1 to 2000. The labor wards are cleaned in the same way several times daily. When the patient enters the maternity ward, if the stage of the labor permits, she is given a bath, and the external genitalia are washed first with soap and then with the biniodide solution. The woman then receives a vaginal injection of the biniodide solution, 1 to 4000, and a square of tow soaked in the biniodide is placed over the vulva. Every three or four hours a new injection of the biniodide is given, especially if there have been frequent examinations made; other injections are given after the birth of the child, and two hours

after delivery the woman is carried into the ward for puerperal women. The cord of the child receives a dressing of sublimated wadding, and the breasts of the mother are covered with boricized cotton. Immediately after birth the child receives an instillation of lemon-juice into the eyes. This prophylactic measure has given excellent results. The eclamptic or albuminuric women receive injections of a saturated solution of naphthol. During the puerperium, in case of fœtid lochia, vaginal and intra-uterine injections are given, and should there be fever which persists, the woman is isolated and placed under continued irrigation with phenic water, 1 to 60. In case of an operation upon the vagina or perineum, a piece of iodoform gauze is placed in the vagina and upon the vulva. After each operation the metal instruments are heated in the alcohol flame—except the cutting instruments—and then placed in a solution of phenic water, 1 to 20. Rubber instruments are kept in a glass containing the biniodide solution. The antiseptic substances employed are:

1. The solution of the biniodide of mercury, according to the following formula:

℞.—Biniodide of mercury } of each . 7½ grains.
Iodide of potassium }
Water . . . 9 ounces 4 drachms.—M.

This solution is employed pure for the toilet of the hands after careful brushing and washing with soap. It is diluted with one-half of its volume of warm water for injections and dressings.

2. The phenic water employed is the strong solution, according to the formula of Lister, 1 to 20.

3. The vaseline which is used for making examinations contains phenic acid, 1 to 50.

Professor Pinard has never had a local or general accident of mercurial origin since he has adopted the employment of the solution of the biniodide of mercury. The solution has no disastrous effects upon the hands of the operators.

Guéniot, surgeon of the Maternity, employs as an antiseptic phenic acid, and has always obtained the best results. He uses the hundredth solution for the living tissues, and the twenty-fifth for the fumigations or the washing of the instruments. The concentrated solution may produce an erythema; the solution in use, the hundredth, is by no means dangerous, and has never produced poisoning, either as a vaginal or intra-uterine injection. When called to attend a patient in private practice, Guéniot employs a phenic solution of the following strength:

℞.—Distilled water . 9 ounces 4 drachms.
Phenic acid . . . . 10 drachms.—M.

For living tissues this solution is diluted to about three times its volume with water, and is then used for washing the external genitals, for vaginal injections, and for the antisepsis of the hands of the accoucheur and his assistants. For disinfecting the beds, the soil, the walls, and wash-basins, sublimate solution is employed. This solution is of the strength of 1 to 4000. It is also occasionally used for washing the external genitals and for vaginal injections. A strong solution of phenic acid (10 drachms to 9 ounces 4 drachms of water) is used for the instruments. Examinations are made as rarely as possible, and the lubricating body is boricized vaseline. During labor, solutions of antiseptic materials of weak strength are injected into the vagina. Labor terminated, the eyes of the infant are washed with boiled water, or with a weak solution of sublimate, or one drop of a weak solution of silver nitrate, neutralized by salt, may be employed. The cord is dressed with a small piece of antiseptic wadding. The dressing of the mother consists of a tampon of iodoform gauze. During the following days, and twice daily, an abundant vaginal injection is given. In case of an operation, the following antiseptic precautions are taken: 1. Phenic fumigation of the operating ward by permitting a four-per-cent. solution of phenic acid to boil in the free air; 2. The instruments are boiled in a strong solution of phenic acid (1 to 25); 3. The sponges are composed of pieces of tarlatan boiled in the same solution; 4. Disinfection of the hands; 5. Dressing of the iodoform gauze of commerce.

Porak, in the Hospital Lariboisière, observes antisepsis largely as above. When a woman enters the hospital she is placed in a bath and cleansed with soap. The genital organs are washed in soap, brushed, and bathed in a solution of sublimate, 1 to 1000. After this disinfection compresses soaked in antiseptic solutions are placed over the vulva to prevent later infection. During labor, injections of sublimate, 1 to 2000, are used. Examinations are made as seldom as possible, and then only with every antiseptic precaution. Phenic vaseline is employed as a lubricant. Porak prefers, however, the following preparation:

℞.—Vaseline . . . 3 ounces 5 scruples.
Corrosive sublimate . . . 7½ grains.
Alcohol (to dissolve sublimate) . qt. suff.—M.

Intra-uterine injections are reserved for cases where a macerated fœtus exists, in cases of obstetrical interference, or where vulvar lesions are suspected. In case of a tear of the perineum iodoform gauze is used. The eyes of the infant are bathed in a concentrated boric solution. If the mother has a vaginal discharge, a few drops of this solution of silver nitrate is employed instead.

℞.—Distilled water . . . . 5 ounces.
Silver nitrate . . . . 15 grains.—M.

In case of retention of the membrane, fœtid lochia, or tear of the perineum after unsuccessful union by first intention, vaginal injections are used together with intra-uterine injections. The corrosive sublimate solution for instruments which do not amalgamate is as follows:

℞.—Distilled water . . 9 ounces 4 drachms.
Tartaric acid . . . . 4 scruples.
Corrosive sublimate . . 15 grains.—M.

The solution of 1 to 2000 is reserved for the hands.

SOCIETY PROCEEDINGS.

FIFTH FRENCH CONGRESS OF SURGERY.[1]

THE Fifth French Congress of Surgery opened its sessions on Tuesday, March 31st, in the Medical School of Paris, under the presidency of PROF. GUYON. Many foreign, as well as all the eminent French surgeons, were present at that meeting.

After an appropriate discourse by the President, DR. GUYON, the members immediately set to work.

DR. J. BOECKEL, from Strasburg, read a communication on "Resection of the Knee-joint."

The author prefers, in many instances, resection of the knee-joint to amputation of the thigh, in different pathological lesions. He founds his opinion on a series of 140 patients whom he has observed. The principal conclusions at which he arrived are: suppression of the bony suture, of the hæmostasis, and of drainage. The author thinks that resection of the knee can be performed at any age with safety, in very old as well as in very young people; in children, however, between the ages of five and seven years, resection is excellent, if the surgeon makes an intra-epiphyseal resection and is parsimonious in the excision of bony tissues. He has performed 23 resections of the knee in persons varying from forty to eighty-two years of age, and only twice was he compelled to do a secondary amputation. Age, therefore, is not a contra-indication.

As to the indications for the operation: 1st. In those operations which are obligatory, such as in all tuberculous articulations, he operates early; in these cases he has always found well-defined articular lesions.

If resection is a question in any case, he prefers to employ it rather than the contrary, as he has found that partial operative interference in very often insufficient.

In regard to the *modus operandi*, the author discards the bony suture, which is replaced by vertical suspension of the extremity during twenty-four to forty-eight hours, the excision of a band of skin, or deep catgut suture.

As regards hæmorrhage, all ligatures are omitted as a result of the vertical elevation of the extremity. Drainage is abandoned, which allows one to obtain a cure with one dressing.

Out of 61 operations performed during the last three years, 50 are radical cures without a fistula, 6 are cured with fistulæ; 1 secondary amputation after three months; 1 pseudarthrosis; 3 deaths—1 from influenza, 1 from cerebral accident, and 1 from tuberculosis ten months after operation.

DR. CHIRIAR, from Brussels, presented an interesting history of "Intestinal Obstruction by a Calculus." The patient was a very nervous woman, fifty-one years of age, suffering from a voluminous fibroid tumor of the uterus; she also suffered from severe constipation necessitating frequent purging. In August last she was suddenly seized with symptoms of complete arrest of solid matters and gas. On September 2d she was taken with vomiting, which was bilious at first, but soon became fæcal. On September 6th, Dr. Chiriar proposed surgical interference, which was opposed for two days, but finally accepted.

A sub-umbilical incision five inches long was made, through which the peritoneum was opened. A bloody serum oozed out; the left hand, introduced into the left side of the cavity, came in contact with a hard, movable tumor, which was easily drawn out of the wound; it was then found to be a calculus the size of a small egg, which was absolutely imprisoned in the contracted intestine. The intestine was carefully isolated with sponges and an incision was made from two to two and a half inches in length, through which the calculus was extracted. A Lembert suture was applied to the intestinal wound and the abdomen closed. During that day the patient had three normal passages, and on the fourth day was cured. The calculus weighed 18 grammes, and measured one and a half inches in its long diameter. The centre of it was composed of cholesterin and biliary pigment, while the periphery was calcareous.

In an operative point of view, the author insists on the necessity of carefully applying the sutures. These sutures are always made with catgut No. 1. The mucous membrane was sutured separately, while the serous coat was united by a double Czerny-Lembert suture; in this way complete union always takes place.

As soon as the calculus was removed from the intestine there was a powerful contraction of that part of the gut, which it was thought at first would necessitate an excision of a portion, but as it was thought to be of reflex origin it was left alone, and the consequences were most favorable.

PROF. PANAS, from Paris, next spoke on a case of "Orbital Angioma," which is very rare, as there are only about sixty cases reported as existing in the literature of the subject.

The best diagnostic signs are the coexistence of exophthalmus and a nævus or vascular spot on the eyelid, with a certain degree of softness and reducibility during the first two or three years of its existence.

In the history produced, the lesion had begun at the age of two years and the tumor had been treated by electrolysis and injections of Pagliari water; the tumor had diminished somewhat, but the exophthalmus had persisted. Vision remained good until the age of eight years, when she suffered from typhoid fever; she then presented a phlegmonous inflammation of the orbit, which necessitated enucleation. The author then found a small tumor, deeply situated, which contained pus. This pus was examined and found to contain the bacillus of Eberth, and he had then to deal with a spontaneous infection of the angioma by the bacillus of typhoid fever.

This case of *endo-infection* is not an isolated one, as during the past few months Dr. Panas has found five or six cases in which there was certainly an endo-infection consecutive to influenza. In the case in question, the slow circulation of the angioma had certainly produced an arrest and accumulation of bacilli which had developed in that place and had infected the orbital region.

At the second meeting of the Congress, on March 31st, the communications in answer to the question which had been announced for discussion were considered. This question was: On Surgical Interference in Affections of the Nerve Centres (primitive trephining of the cranium excepted).

PROFESSOR V. HORSLEY, from London, being unable to attend, sent his assistant, Dr. Boyce, who read the

[1] Held in Paris from March 31 to April 4, 1891.

communication; the principal portions of which are: That Dr. Horsley always made a very large trephine wound; the cutaneous flap is very large, as well as the bony opening. The resection is made with a circular saw, as follows: The segment of bone to be removed is indicated, the saw penetrating to about half the depth of the bone; in the centre of this segment a smaller piece of bone is removed, and the rest of the bone, up to the limit indicated by the circular saw, is removed with cutting forceps; as much as possible, all excised bone is put in position again before the wound is closed. As regards the determination of the exact spot to be removed, if there are no lesions visible indicating the diseased part, one can use with great advantage induced currents of electricity.

In regard to tumors to be removed, Dr. Horsley thinks that if after six weeks of internal treatment no good is observed, surgical interference is justifiable. Even in certain cases, where it is found that the tumor cannot be removed, trephining has been sufficient to cause certain troubles to disappear, such as headache, or optic neuritis —which are caused by cerebral compression; while in one case it was found that simple exploratory trephining was followed by atrophy of the tumor.

PROF. LANNELONGUE, from Paris, then read a paper on "Craniectomy in Microcephalus and in Children Presenting some Lack of Development, with or without Epileptic Fits, all of Cerebral Origin."

The results given are founded on a series of twenty-five cases. In regard to microcephalus, Dr. Lannelongue has found that in such children ossification is very much advanced and the fontanelles are very small, which indicate an *anticipated ossification*, and, as a consequence, the brain is also prevented from developing. Craniectomy is very useful in obstetrical compression which has brought on idiocy; also when there has been a prolonged compression within the uterine cavity as a result of a small quantity of amniotic fluid present.

Meningeal hæmorrhages, especially those of the convexity of the brain, bringing on hæmatoma, circumscribed pachymeningitis, and serous cysts, are cases for this operation.

The author has used two different processes, viz., linear craniectomy and the flap craniectomy. In linear craniectomy the incision is made along the superior longitudinal sinus and can be prolonged through the coronal suture, on the motor or Rolandic zone, toward Broca's centre. He has performed that operation on the occipital behind, between the lateral sinus and the occipito-parietal suture; finally, he also made a transverse and symmetrical craniectomy on the frontal bone by detaching the longitudinal sinus.

Flap craniectomy is the one preferred by the author, and by this he means removal of the cranial substance, which is made so as to leave flaps of bone, which remain sufficiently attached by a broad osseous base; sometimes the flap only involves one bone, the parietal or the frontal, more often the flap is "on horseback," so to speak, on two bones, the frontal and parietal. The flaps have the form of a ∪ or an inverted ∧, rectangular, horseshoe-shape, or T. The loss of substance is to the extent of 8 to 12 millimetres, the operation lasting from forty to forty-five minutes.

The operation is done as follows: The cranium is attacked at one of the extremities of the wound with a trephine, the rest is cut with the forceps. The dura mater is next detached and allowed to remain untouched, unless there should be lesions indicating pachymeningitis, in which case it would then be advisable to open the parts. If the dura mater is opened it must be sutured. As to the periosteum, it is preferable that it should not be touched. In two post-mortems made one and two months after the operation, both patients having died from croup, no bony regeneration through the dura mater was observed. Operative complications are not serious, for hæmorrhage is of slight importance, the meningeal artery and its branches being easily reached.

As to the results of the twenty-five operations, the author has twenty-four operative cures and one death, forty-eight hours after the operation, of acute septicæmia, or the continuous flow of the arachnoid fluid; three cases underwent a little suppuration, the longest one having lasted three weeks; no case of necrosis. The youngest child was eight months old, while the oldest was twelve and a half; thirteen were boys and twelve were girls. As to the after-results, the majority were improved both intellectually and in their ability to walk.

DR. TH. ANGER, from Paris, also presented a case of craniectomy which he performed on a girl eight years old. The previous history was that the child had walked at fifteen months; toward eighteen months the parents remarked a deficiency in the intellectual development, and at this time the patient was seized with nocturnal convulsions, which occurred as often as thirty times in one night. When Dr. Anger saw the child for the first time, these convulsions had not occurred for one year, but as regards intellectual power the eight-year-old girl was not more advanced than when eighteen months old, being unable to recognize her letters; she said "papa" and "mamma," but no phrase could be pronounced. She had not the least notion of cleanliness, and would urinate anywhere. When walking, her head was hanging and her gaze was never fixed.

Examination of the head showed that the left side was flattened, which stimulated the surgeon to operate upon that side.

The *modus operandi* was as follows: A linear incision was made from the frontal eminence to the lambdoid suture, a disc of bone was then removed by trephining, and the cranial excision continued along the above-mentioned line for twelve centimetres (four inches). The dura mater projecting was punctured with a hypodermic needle, but no fluid escaped; the gap was still further enlarged, and finally resulted in a loss of substance having an oval form, being eleven and a half centimetres in its antero-posterior diameter and four centimetres transversely; the skin was then sutured. No accident occurred, and eight days later the sutures were removed. The results of the operation were, that the next day the patient ceased to urinate and have her passages in bed; a few days later she began to ask to eat; then cried when told that her parents were absent; the look was frank, the athetose movements ceased, and the child walked and jumped. When she was brought home to her parents she recognized all her family, and her intellect has gradually gone on improving ever since the operation.

DR. DURET also presented two cases of trephining—one for an aphonia, which followed a fall on the head; the other for traumatic epilepsy, the accident having occurred several years before.

DR. JEANNEL, from Toulouse, presented a very interesting case of "Jacksonian Epilepsy," treated by trephining. The patient was a baker, thirty-two years old, who, in February, 1890, was suddenly attacked by apoplexy, which left behind it a certain paresis of the right superior extremity. Resumed his occupation, when, two months later, spasmodic movements appeared in his right upper extremity, which returned every two days. Anti-syphilitic treatment produced no beneficial results.

These epileptiform attacks occurred every second night, and convulsions were present, especially on the right side, lasting from eight to ten minutes, sometimes accompanied by delirium; he also presented a well-marked aphasia—very variable, however, for sometimes he only could say one word, while at others he could speak sufficiently for ordinary use. No depression of the cranium could be discovered on the left side, but it was found that, when fifteen years of age, the patient had received a stab wound just above the ear on that side; in fact, a small cicatrix could be seen in that location, but it was not adherent. The cranium was opened as usual, on the Rolandic line; the dura mater did not present any pulsation; beneath it, however, existed a soft, violet mass, which was adherent to the cerebral substance, and prolonged itself below and behind. The mass was extirpated with the curette, and an opening about the size of an almond was made; two punctures in the middle of the cerebral substance gave no results. The next day the spasmodic movements had ceased, but were replaced by a paralysis. Speech returned gradually, and to-day there remains only an incomplete paralysis, but, above all, there exists a contracture of the forearm; every fifteen days the patient has an epileptiform attack, during which he bites his tongue.

An interesting case of "Essential Epilepsy" was reported by DR. GIRARD, of Grenoble. The patient, a woman, aged twenty-nine years, had suffered since the age of fourteen with very frequent epileptic fits, with vertigo and unconsciousness. Out of six children, she lost five after convulsions. In November last she shot herself in the right temple with a revolver. When first seen she was found in a deep comatose state, the left arm being inert along the body; at forty-five millimetres from the external orbital or angular process there was a rounded perforation through which the arachnoid fluid escaped. She was trephined and the bullet and several pieces of bone removed. No suture of the dura mater nor drainage were employed; the skin was completely sutured. Union took place in seven days.

Operative results: The coma ceased the day of trephining. The next day the ideas of suicide disappeared, and for five months she had not had an epileptic fit, while vertigo had become very rare. Her menstruation has become regular. This trephining, performed for the injury, seemed to have cured the epilepsy.

DR. REGUIER, of Paris, also presented a case of "Trephining for Jacksonian Epilepsy due to Cystic Glioma." The history is: A child, aged ten years, was attacked, when five years old, with peculiar symptoms. A sensation of pricking of all the mucous membranes of the face, with abundant secretion of the conjunctiva and nose, existed. In 1888 she fell several times on the head and had a cicatrix on the left parietal region. The first convulsive fit occurred in April, 1889. These became more and more frequent until they occurred four or five times a day. They began in the face, the mouth and tongue being deviated to the right, and then the head. Then the convulsions extended to the arm and leg. No sensitive troubles. Prof. Charcot, who then examined that child, gave the following diagnosis: Partial sensitive motor epilepsy, corresponding to a probable lesion of the middle and inferior portion of the Rolandic convolutions.

She was trephined in the Rolandic region, where a gray-colored tumor of cystic appearance was found, but extending so far down into the cerebral substance that only its superficial portion was removed. The wound was dressed and healed. No change took place in the condition. Five months later the primitive trephined wound was again exposed, and the cyst removed with a curette. The next day the patient had six epileptiform convulsions; six days after a new attack with aphasia occurred, but all soon disappeared, and since then, three months and a half ago, she had had no attack and no other symptom presented. The tumor was a glioma with a cystic cavity in its centre; its situation was at the inferior extremity of the pre-Rolandic groove.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PÆDIATRICS.

Stated Meeting, April 9, 1891.

AUGUST CAILLÉ, M.D., IN THE CHAIR.

THE theme of the evening's discussion was "The Prevention of Diphtheria," and the Chairman introduced the subject by referring to the number of deaths reported to the Board of Health as occurring last year from scarlatina, measles, and diphtheria. There were 3000 cases of scarlatina with 350 deaths, 9000 cases of measles with 700 deaths, and 4500 cases of diphtheria with 1400 deaths. These figures, he said, represented about the average. He thought that in view of the fact that the mildest form of simple sore-throat might become a most severe form of diphtheritic sore-throat, the profession might do the community an incalculable benefit by improving the methods of prophylaxis. Knowing the character of the enemy, and the nature of its attack, we should now be able to protect ourselves against its inroads. By way of suggestion, he alluded to the great good that could be accomplished by cleansing the mouth and nose with mild antiseptic washes, improving the condition of the teeth, and rendering the mucous membranes generally less vulnerable to an attack of this disease. Dr. Caillé said that he admired the efforts that were being made by our Board of Health to prevent the spread of infectious diseases, but he had become convinced that municipal control in large cities was inadequate to cope with this great problem, especially as regards the public and private schools. Many families knew to their sorrow how much disease had entered their households since the little ones began to attend school, and he wished again to call attention to a plan which he had elsewhere described at length, by which,

under a system of daily medical inspection, the schools might be prevented from becoming, as they now are, centres of infection.

The systematic discussion of this all-important subject was opened by Dr. J. Lewis Smith, who first spoke of our present knowledge of the cause of diphtheria, the Klebs-Löffler bacillus. This bacillus causes the fibrinous exudation, but is local and superficial in its action, and does not in itself cause systemic infection. This infection is the result of a ptomaine which is formed by this bacillus, and which is taken up by the lymphatics and bloodvessels. Other microbes, as well as irritants not of microbic origin, sometimes give rise to the formation of a similar fibrinous exudation, but the action of the diphtheria bacillus is characterized by the production of this ptomaine, which by infecting the system gives rise to a peculiar paralysis, and to a nephritis attended by albuminuria, but with little or no dropsy, and sometimes attended by such symptoms of uræmic poisoning as vomiting and convulsions. Dr. Welch has cultivated this diphtheria bacillus, and by a series of inoculations with these cultures has produced diphtheria, so that this theory of the origin of the disease seems to be fully established.

In the decade following 1850, Dr. Smith said diphtheria first made its appearance in New York City, being spread by the sewers, which to this day are a constant and subtle agency in the dissemination of this disease. The speaker cited several instances in which diphtheria had been spread by domestic animals, and also where it had been carried by physicians to their own families. The bacillus was known to be very tenacious of life, and this was well shown in the case of a child who contracted diphtheria from examining the clothing of her mother who had died, two years before, of diphtheria. During all this time the clothing had been packed away in a chest.

Referring to the special subject of the evening, the *prevention* of diphtheria, Dr. Smith said that it should be constantly borne in mind that the physician not infrequently carries the disease himself, and hence his visits to such patients should be short, and when examining the throat he should be particularly careful to stand to one side of the patient, so that no particles of mucus may be coughed out of the patient's mouth and lodge upon his person or clothing. The neglect of this precaution, a physician had recently told him, had resulted in the death of his child. It was a good plan for the attending physician to carry with him tablets of bichloride of mercury, so that he might frequently and effectually disinfect himself, and if he were compelled to go from such a case to one of confinement, he should also change his clothing. During convalescence the patients should not be allowed to mingle with others for at least a month. The vexed question of the value of sulphur fumigation was discussed by the speaker, who decided against this time-honored method, and in support of this position he related an instance in which a ward in the New York Infant Asylum, which had become infected with diphtheria, was fumigated most thoroughly with an unusually large quantity of sulphur, and immedately after the fumigation the air of the room was examined biologically by Drs. Prudden and Cheesman, who found the diphtheria bacillus present in unusually large numbers. Washing the ceiling, walls, and floor with a solution of bichloride of mercury is much more effectual, and did not require that the room should be vacated. Families frequently move out of infected apartments without fumigating them, and hence it was not surprising that others moving into these rooms shortly afterward were often attacked by the disease.

Dr. Smith was heartily in favor of the daily inspection of our schools, and in addition, advised that the schools be disinfected once every month.

Dr. Joseph D. Bryant who was unable to be present, sent a letter, in which he spoke of the efforts which the Board of Health had been making during the past three years to stamp out infectious diseases, and admitted that although these endeavors had proved successful as regards smallpox, but little had been accomplished in connection with other infectious diseases. The ceilings and walls of the tenement houses, and frequently the decorations of our public buildings, were well calculated to harbor and spread disease-germs, yet no good would result from ordering the owner to remove the paper, scrape the walls, etc., for if the owner ignored this, the law was such that the only recourse the Board of Health would have, would be to vacate the house, and this meant sending the poor occupants with their infected goods to some other place. At the present time, rooms were fumigated with sulphur, but a better method was needed. The Board was in a better position so far as the disinfection of fabrics was concerned, for they had recently had erected near the Willard Parker Hospital, in accordance with the plans of Drs. Prudden and Biggs, a very efficient apparatus for the disinfection of fabrics, either by moist or dry heat. The Board would, if desired, take the infected fabrics, disinfect them in this apparatus and return them.

Dr. T. M. Prudden, taking up the subject from the standpoint of the bacteriologist, said that primary or true diphtheria was caused by the Löffler bacillus, which was very tenacious of life, and could be readily carried by the dust. There was also a form of pseudo-membranous inflammation, but this is due to the streptococcus. The diphtheria of animals he did not consider to be identical with that found in the human subject. As the life history of the Löffler bacillus was well known, our present knowledge indicated a line of prophylactic treatment; the medical profession should take the initiative step, and the health boards should then continue the good work. By the use of germicides the bacillus could be killed, and the frequent use of milder gargles and washes would prevent the proliferation and spread of such germs as had become detached from the pseudo-membranes and were liable to carry infection to other parts. Especially was this true when considered in connection with that very serious complication, aspiration pneumonia. An absolute and early diagnosis of diphtheria could be made by the biological culture method, and the provision for such examinations in connection with children's asylums would be of great service, both in preventing epidemics and in assisting in the inauguration of an early and efficient treatment. It was customary in many of these institutions to quarantine in one ward children suffering from various kinds of sore-throat until the diagnosis was certain, but this plan unnecessarily exposed children suffering from

simple tonsillitis, when in a condition to invite infection with diphtheria, to this disease. Such management could not be too strongly deprecated. The speaker had made a large number of biological analyses of air from hospital wards, and in view of the fact that the diphtheria bacillus can be readily carried by the dust, he wished to call attention to the pernicious habit of shaking the bedspreads in the wards. These spreads presented almost as large a dust-collecting surface as the floor of the ward.

DR. A. JACOBI spoke of the strange silence that had prevailed in medical literature generally upon the subject of the *prophylactic* treatment of diphtheria. In addition to caring for those sick with the disease, he thought it would be well to provide buildings or places of refuge for children temporarily sent from home to avoid the disease. In the last thirty years, in New York City alone, fully forty thousand persons had fallen victims to diphtheria, and many more were suffering from its effects, and yet in the face of these appalling figures, we are told that daily medical inspection of our schools is impracticable. When a single case of variola, or of typhus fever, is discovered in the city, the daily press prints the most sensational articles, but thousands are constantly dying of diphtheria, and nothing is done to stay the scourge. If the press would arouse from this apathy and work with the medical profession, it would be easy to establish this daily inspection of the schools.

DR. H. D. CHAPIN said that the schools naturally received considerable attention in such a discussion as this, and so it might prove opportune for him to speak of what he had seen in his tour of inspection of the public schools. In one of the primary schools, which is crowded with children, there is no place whatever provided for the children's clothes, and they are, therefore, compelled to pile them up on the back seat. When it is remembered that these garments are often wet, and that they belong to children coming from the dirtiest and poorest tenements, it was easy to understand how readily this custom favored the spread of infectious diseases.

DR. L. EMMETT HOLT spoke of the preventive measures which had been adopted in two institutions with which he was connected, and which had proved most efficient. In one of these, the New York Infant Asylum, where there were upwards of two hundred children under two years of age, sporadic cases of diphtheria had occurred every three or four months during the past three years, but in every suspicious case, prompt individual quarantine has been adopted, the child's clothing has been removed from the ward, the ward has been fumigated, and the walls washed with bichloride solution, the bedsteads have been washed with carbolic acid solution, 1 to 40, and the bedding has been steamed. The throats of the children in the ward who have been exposed are examined twice a day, and if there be much nasal discharge, nasal syringing is at once begun. As a result of these prophylactic measures, not a single *epidemic* has occurred during this period.

CORRESPONDENCE.

NEW ORLEANS.

THE fifty-seventh annual commencement exercises of the Medical Department of the Tulane University of Louisiana were held at the Grand Opera House of this city on Wednesday, April 1st. Judge W. W. Howe was the orator of the day, and delivered an able address, dwelling especially on the relation of the physician to the law and sanitation. The dean, Dr. S. E. Chailli, made his report to the president of the University. The medical department had 405 matriculants this year, this being the largest number in the history of the University. There were 105 graduates in medicine and 13 in pharmacy.

Dr. C. D. Owens, President of the Louisiana State Medical Society, has called the annual meeting in New Orleans for May 13th. The Society was to have met last May in Baton Rouge, while the Legislature was in session, with the hope of having a bill passed for the regulation of the practice of medicine in this State. On account of the extensive overflows no meeting was held, but a sub-committee was appointed to prepare a bill for the Legislature. This bill passed one branch of the Legislature, but was defeated in the other by the homœopaths and a few regular physicians whose motives have never been known. The Society will renew its efforts, and it is hoped that we will soon have a State Board.

The profession here do not take much interest in the State Society. Few of them attend its meetings, even when they are held in New Orleans. The only medical society in New Orleans suffers in the same way. There are about 210 regular physicians in New Orleans, many of whom are members of the New Orleans Parish Medical Society, and yet it is seldom that there are more than fifteen members present at its meetings, which are held once a month. Such a state of affairs should not exist in such a medical centre as New Orleans, yet it does exist, and those members of the profession who are best able to remedy this evil seem to take the least interest in it.

MONTREAL.

SINCE my last communication lymphomania has affected us about as badly as it has other communities. While the precious liquid was unobtainable the excitement continued quite active, both among the laity as well as among the profession. In November two of our younger medical men hurried off to Berlin, well laden with letters from the Governor-general, Consul, Board of Health, and others, to be early in the field. A good deal of lay advertising had to be submitted to, in connection with this trip. On December 19th the first supply of paratoloid reaching Canada was put in use in the Montreal General Hospital. Selected cases, of skin, joint, and internal tuberculosis, were subjected to careful treatment and close observation. Alas for human hopes, in three months the treatment is abandoned as unsatisfactory and dangerous. The following are some of the sadly-interesting results reported at a recent meeting of the Medico-Chirurgical Society by Professor Roddick, the chief surgeon of the hospital: A patient, who had derived great benefit from cauterization of the interior of

the bladder through a supra-pubic cystotomy, remained in the hospital with trouble in one testicle; after a few injections of tuberculin the other testicle, apparently normal, or, at least, quiescent up to this time, showed signs of irritation, and went on to disorganization, requiring its removal. The bladder was unaffected by the injections. A child, with incipient knee-joint disease, could walk when first injected; very soon the joint gave great trouble, a destructive action made rapid progress, and the knee had to be excised. In the case of a man with tarsal bone disease of limited extent, under tuberculin therapy the trouble manifestly and rapidly extended, and the loss of the foot was the disastrous result. A case of lupus of the face of long standing, in a girl of eighteen years, was pronounced worse than before the injections. With such lamentable possibilities, he would be a rash man indeed who would use the fluid in private practice.

From the medical side of the hospital the reports are unsatisfactory, though not clearly bad.

This week our medical schools close for the session, and with the incoming month a large number of young medicos are let loose on the community. The following are the numbers of the medical graduating classes of 1891: McGill University, 49; Montreal School of Medicine, 24; Laval University, 13; Bishop's College, men, 3; women, 1. We thus have the first woman graduate of the province this year. The lady in question, Miss Ritchie, B.A., has had a brilliant training, having previously taken the honors course in art at McGill. As yet, old McGill gives no invitation to female professional students, the authorities of the University being opposed to co-education even in arts. Up to this time our city can only boast of one recognized female practitioner of medicine, a graduate of the Women's Medical School of Kingston.

Dr. E. H. Trenholme, the well-known gynecologist, on account of ill health, has had to remove to the more congenial climate of the Pacific Slope. This gentleman was a daring and original operator, and a physician of marked individuality. He constantly asserted his claim to be the author of Tait's operation, on the strength of an early reported successful case. This priority was acknowledged by Battey and some others.

Prof. George Ross, sub-dean of McGill, has been unable to fill the chair of practice this winter; his lectures, having been prepared, were delivered for him by other members of the faculty. Dr. Ross has found it necessary to limit himself, for the present, to consultation practice.

CHICAGO.

THE twenty-first annual commencement exercises of the Woman's Medical College were held at Central Music Hall on March 30th. The degrees were conferred by Professor I. N. Danforth. The graduating class numbered 30. Two of the graduates, Drs. Maggie L. McCrea and Emma White, were appointed internes at the Woman's Hospital of this city. Dr. Blanche Denig, another graduate, received the appointment of interne to the New England Hospital, Boston, and Dr. Anne McFarland has been appointed superintendent of the Oaklawn Retreat, Jacksonville, Ill.

At a meeting of the Alumni Association in the evening, a bust of the late Professor William H. Byford was formally unveiled. It is life-size, and of Carrara marble. It is the handiwork of Lorado Taft. The bust presents a faithful likeness of the late Professor. Dr. M. J. Mergler made the dedicatory address.

The effort that has been made here to organize and build a hospital for the exclusive use of the colored people has kindled a flame of righteous indignation amongst the people of that race. The colored people are opposed to such a sectarian institution, for the reason that it encourages and keeps alive race prejudice, and they consider it in direct opposition to the spirit and genius of our American form of government. They say that the patients and inmates of the hospitals and benevolent institutions of this city are all treated alike, irrespective of race, color, nationality or religion, and why encourage the inauguration of such a movement?

An institution, to give instruction in medicine and surgery, to be known as the Illinois School of Medicine, was recently incorporated, with a capital stock of $10,000. The incorporators are physicians.

The annual commencement exercises of Rush Medical College took place March 31st, in the presence of a large audience, a class of 204 graduating, the largest in the history of this famous institution. A palpable cloud rested upon the faculty and class—the knowledge that a beloved associate and instructor lay dead in his darkened home, subduing every heart and softening the accent of every lip. The sudden death of Dr. Charles T. Parkes was a severe blow to "Rush," and it fell with added force, following so close upon the deaths of the President, Dr. James Adams Allen, Dr. Joseph P. Ross, and Dr. William H. Byford, all members of the faculty, who have died within this college year.

The ninth annual commencement exercises of the College of Physicians and Surgeons of this city were held March 24th. Professor S. A. McWilliams conferred the degrees. The graduating class numbered 42.

The Alumni Association of the College of Physicians and Surgeons held a special meeting recently with reference to reinstating Dr. W. C. Brinkerhoff. Two years ago Dr. Brinkerhoff was dropped from the membership of the Alumni Association for advertising in the daily papers special qualifications in the treatment of specific diseases. A year later he made application for a hearing before the Alumni with the object of eventual reinstatement. A hearing was granted, and the doctor and his friends, it is said, endeavored to convince the majority of the Alumni that there was no violation of the code of ethics, by a simple announcement in the press of the diseases which he felt qualified to treat. After considerable discussion, a vote on the motion to take up the application for reinstatment disclosed 13 against and 2 for it, 20 members declining to vote.

La grippe has been very prevalent here. At the Alexian Brothers' Hospital every ward is full, and several patients were turned away because of the lack of room. At the German Hospital, out of seventy patients, over one-third are suffering from *la grippe*. Out of the eight house physicians, six are unable to attend to their duties, and several of the nurses are too sick to be at their posts. St. Joseph's Hospital has accommodations for seventy-five, but here, as at other places, everything is crowded. At the Presbyterian Hospital much the

same condition of affairs exists. Out of one hundred or more patients, about twenty-five are *la grippe* sufferers, and a large percentage of the employés are under the care of physicians. At the Illinois Training-School for Nurses twenty-two persons are down with the prevailing malady. The county hospital is probably the most overcrowded of any of these institutions. Out of 350 or more medical patients, at least one-third are suffering from throat and lung troubles. The hospital is more than overcrowded, but patients are still received, an average of seven a day, and there is not a ward in the medical department which has not from fourteen to fifteen patients on the floor. There are fully 150 more patients at this institution than the hospital is intended to accommodate, but so long as the epidemic continues, an effort will be made to care for all, if possible.

According to the Health Office report the weekly mortality up to March 21st, from throat and lung troubles, was unusually large. Pneumonia caused the deaths of 170, bronchitis 81, diphtheria 23, and *la grippe* 19. This would indicate that outside the hospitals the disease is proving much more fatal than in them. Consumption carried off 46, making a grand total of 339 deaths during the week from bronchial and pulmonary troubles.

ST. LOUIS.

THE annual summary of mortality of the City of St. Louis, which has just been issued by the Health Department, contains some interesting data.

The annual death-rate is given at 18.45. The total number of deaths reported is 8407, 405 more than the previous year. The mortality from different causes is distributed as follows, viz.: Total from zymotic diseases, 1547; from constitutional diseases, 1635; from local diseases, 3781; from developmental diseases, 969; from violence, 476; unknown, 1. There were 186 deaths from diphtheria; 140 from typhoid fever; 436 under five years old; and 104 above that age from diarrhœal diseases. 843 deaths are attributed to phthisis; 336 to marasmus, tabes mesenterica, and scrofula; 601 are referred to pneumonia; 332 to bronchitis; 469 to diseases of the circulatory system; 207 to meningitis and encephalitis; 444 to convulsions and trismus; 399 to other diseases of brain and nervous system; 230 to enteritis, gastritis, etc.; 253 to Bright's disease and nephritis.

4611 were male, and 3796 female; 3115 were under five years of age.

11,564 births were reported during the year, of which 704 were stillbirths.

The competitive examination for appointments as resident physicians in the City and Female Hospitals called out applicants from the several colleges as follows, viz.: St. Louis Medical College, 9; Beaumont Hospital Medical College, 6; Marion Sims Medical College, 3; Missouri Medical College, 4; St. Louis College of Physicians and Surgeons, 1. The following are the successful competitors, viz.: H. H. Born, H. W. Buvig, C. J. Orr, J. J. Seibold, J. A. J. James, W. H. Fuchs, J. H. Bell, J. P. Stock, H. D. Brandt, F. S. Haeberle, and E. C. Runge. Seven of these were from the St. Louis Medical College, three from the Beaumont Hospital Medical College, and one from the St. Louis College of Physicians and Surgeons.

The Missouri Medical College held its "Golden" (50th) commencement exercises Tuesday Evening, March 31st, and issued diplomas to ninety-four students who had completed their course and passed their examinations.

La grippe has visited our city in a very mild form this winter. There have been a good many cases, but most of them have been mild in their character, and the mortality has been very low, very different from that which has been experienced in Chicago.

Governor Francis has recently made two appointments to membership in the State Board of Health to fill vacancies caused by death, viz., John P. Harmon, of Johnston County, vice Wm. Gentry, deceased, and Dr. R. C. Atkinson, of St. Louis, vice James B. Bather, deceased; both appointments being for a term expiring July 2, 1892. Dr. R. C. Atkinson is at present a member of St. Louis Board of Health, having been appointed by Mayor Francis about four years ago.

I was about to call the attention of your readers to the recent failure of the attempt to secure the passage of a bill, introduced into the Legislature, for the purpose of requiring a three years' term of college work as a requisite for registration as a qualified practitioner of medicine in this State, when I learned that a full statement of the case had been prepared by Dr. C. A. Todd, who was an active member of the committee who had charge of the preparation of the memorial to the Legislature.

It is the earnest wish of the largest part of the teachers and other medical practitioners in this city and State, that it should be clearly understood where lies the responsibility for the recent failure to take an advanced position in medical education, which is desired by a large majority of the profession here.

LONDON.

Dr. Broadbent on Fatty Degeneration of the Heart; Dr. Thomas Oliver on Lead Poisoning.

THE Lumleian Lectures annually delivered before the Royal College of Physicians by one of the senior Fellows, this year fell to the lot of Dr. Broadbent, who took Structural Diseases of the Heart for his subject. What he had to say about fatty degeneration may probably be of some interest to your readers. Deficient blood-supply through disease of the coronary arteries or from other cause he regarded as the most common and most important mode of causation, the atrophy of the muscular fibre thus produced being followed by the invasion of the fibre with fatty granules. Defect in the quality of the blood-supply, the quantity being unaffected, will also produce it, as shown in advanced stages of pernicious anæmia and in severe cases of typhoid fever; the heart in these affections suffers more than the voluntary muscles, because of the constant wear and tear to which it it is subjected. Diabetes and alcoholic excesses may produce fatty degeneration, either by impoverishment of the blood, or perhaps by myocarditis. Cases in which no causation can be made out may be ascribed to a defective assimilative action in the muscles of the heart, or possibly some unrecognized blood condition.

The symptoms at first may be those of dilatation, but in complicated cases dropsy is rare; the effect of the disease is defective pressure in the venous system, and

consequently syncopal, apoplectic and epileptic attacks are characteristics of the later stages. The syncopal attacks do not go on to complete loss of consciousness, but they generally last long, and are accompanied by coldness of the extremities and body surfaces. In the apoplectiform attack the patient is perhaps unconscious, with stertorous breathing, but examination of the pulse and heart will show the entire absence of sufficient tension to cause rupture of a vessel, and this will constitute the best means of recognizing the true nature of the attack; there may be transient loss of power on one side of the body; the patient is never quite the same after one of these attacks, and has increased liability to subsequent syncopal attacks. The epileptiform seizures are generally of the nature of *petit mal*, and are probably dependent upon the defective cerebral circulation from heart failure, the pulse in these cases sometimes being as low as 40. Dr. Broadbent does not believe in the greasy skin and sallow complexion traditionally associated with fatty degeneration; he has often seen patients maintain every appearance of health up to the last.

The most constant and significant feature of the pulse is that it is short and unsustained. It may vary much as to frequency, the most characteristic form, but, at the same time, the most rare is a very slow pulse, with extreme low tension. The impulse of the heart cannot, as a rule, be perceived, and the sounds are inaudable, or very weak, the first sound being short. If there is a doubt as to whether the signs are due to functional or organic disturbance, to subject the patient to slight exertion will probably suffice to solve the problem. If the heart is sound it rises to the occasion, the pulse, heart-beat, and sounds becomes more distinct, stronger, and more regular, whilst the fatty heart "goes to pieces," and the pulse becomes irregular, and shorter than ever, or may even disappear. If the diagnosis is certain, a fatal termination is merely a question of time and circumstances, on which latter, however, much will depend. The patient should have as much sun and fresh air as possible, but must not be exposed to severe cold. Exercise is good for him, but not exertion. His diet must be simple, and his meals regular, and constipation must be avoided.

Dr. Thomas Oliver has recently delivered the Gulstonian Lectures before the same body. He chose "Lead Poisoning" for his topic. He has contributed not a little to the elucidation of this subject in recent years. He says that the first effect of lead upon the system is to interfere with the function of the making of blood, and he has never in any case of lead poisoning failed to find a deficiency in the number of red blood-corpuscles. He regards swelling and ulceration of the gum as the necessary precursor of the blue line; it is more constant and more marked in the lower than in the upper jaw. He also finds that three months is about the time required for its disappearance after the patient is removed from all source of lead poisoning.

His views on the subject of lead paralysis are of special interest; after discussing the neuropathic theory he gives his decision against a peripheral origin, and in favor of a primary lesion in the cord. That this has hitherto escaped detection he explains on two grounds: one, that in the early stages the changes must be slight, sufficient time not having elapsed for them to develop; and, secondly, that so many patients recover. The paralysis attacks functionally related groups of muscles, and the precise parts of the cord in which the centres for these groups are situated is unknown, and must be very small, so that the detection of any lesion of it might easily escape.

Sir Andrew Clark has just been elected for a fourth time President of the College of Physicians, by an almost unanimous vote. He has well deserved the compliment, for he has been most zealons in the discharge of all the duties of his office, even going the length last summer of coming down from Scotland in the middle of his holiday in order to preside at a lecture which has always been delivered in the middle of August. He has done very good work outside the college, too, on behalf of the profession at large, in fighting in the cause of the army medical officers, and though his efforts have not been crowned with complete success, there is no doubt that many of the concessions recently made were owing to his powerful advocacy.

There is not much news in the world of medical politics; the scheme for reconstituting the University of London is still being considered by the senate of that body, but it is more than likely that they will not be able to find a compromise that will satisfy all the contending parties, in which case steps will be presumably taken to form a new university for London students, so it will be some years yet before we can get an accessible degree.

NEWS ITEMS.

A Hospital for Students in Vienna.—A hospital will soon be opened in Vienna especially to accommodate sick students. It has been established by the Students' Association, and contains thirty-eight beds—eight of which are for surgical cases, and nine others, in an isolated pavilion, are for cases of contagious disease. The attending physician is Dr. Redsenbacher.

Rush Medical College, Chicago.—To supply the place made vacant by the death of Dr. Charles T. Parkes in Rush Medical College, the faculty have elected as Professors of Surgery and Clinical Surgery Professor Roswell Park, of the Buffalo Medical College, and Dr. N. Senn, of Milwaukee, Wis. Dr. Park is expected to move here in a few days, and Dr. Senn has already taken up his residence here and is going to remain permanently. Dr. Daniel R. Brower has been elected Professor of Materia Medica and Therapeutics, in addition to the Chair of Mental Diseases, which he already holds. Dr. Sanger Brown has been elected Professor of Hygiene and Medical Jurisprudence. Drs. H. N. Moyer, J. B. Herrick, and J. H. Salisbury have been elected Adjunct Professors of Medicine; and Dr. Charles Warrington Earle Adjunct Professor of Obstetrics and Diseases of Children.

Just as we go to press we have a note from Dr. Park, in which he says that he has declined the election to the Professorship of Surgery in Rush Medical College of Chicago.

A German Medical College in Chicago.—It is said that Chicago is to have a new institution known as the

German College of Medicine and Obstetrics, with a capital stock of $50,000. The college will have ten professors, four to teach in the English language and make a specialty of obstetrics; the other professors will teach in German and have charge of the regular college course. Five years of study will be required before a diploma is granted. It is thought that eventually a college building will be erected near Humboldt Park. The money required will be provided by the incorporators and by the professors who are to occupy the chairs in the college. The professors have not yet been selected.

Milwaukee.—The Milwaukee Clinical Society has changed its name to that of the Milwaukee Medical Society, and is endeavoring to enlarge the scope and membership of the Society. It has elected Dr. S. W. French as president, Dr. U. O. B. Wingate as secretary, and a board of thirteen councillors, who have the general management. It will hold two meetings per month, on the second and fourth Tuesdays, except the months of July, August and September.

Obituary.—DR. WILLIAM C. HUNT, another old practitioner of Chicago, died on March 1st. He had been ill for more than two years, and was a classmate of Dr. Johnson. He was born at Litchfield, Conn., November 8, 1827, and went to Chicago at the age of twenty-one years. He attended Rush Medical College, from which he was graduated in 1851, afterwards becoming a member of the faculty of that institution.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 14 TO APRIL 20, 1891.

By direction of the Secretary of War, the following changes in the stations of medical officers are ordered: MARSHALL W. WOOD, *Captain and Assistant Surgeon*, is relieved from duty at Fort Meade, South Dakota, and will report in person to commanding officer Fort Preble, Maine, for duty at that post, relieving William B. Davis, Captain and Assistant Surgeon. Captain Davis, on being relieved by Captain Wood, will report in person to the commanding officer Fort Clark, Texas, for duty at that station.—Par. 11, *S. O. 85, A. G. O., Washington*, April 15, 1891.

By direction of the Secretary of War, a Board of Medical Officers, to consist of: HENRY MCELDERRY, *Major and Surgeon*; JAMES C. MERRILL, *Captain and Assistant Surgeon*; and W. FITZHUGH CARTER, *Captain and Assistant Surgeon*, is appointed to meet at West Point, N. Y., May 1, 1891, or as soon thereafter as practicable, to examine such cadets of the U. S. Military Academy as have been granted leave of absence until that date on account of physical disability, and to report upon their physical fitness to continue with the Corps of Cadets.—Par. 2, *S. O. 83, A. G. O., Washington*, April 13, 1891.

By direction of the Acting Secretary of War, leave of absence for six months, on surgeon's certificate of disability, is granted PASSMORE MIDDLETON, *Major and Surgeon*.—Par. 4, *S. O. 81, Headquarters of the Army, A. G. O.*, April 10, 1891.

By direction of the Acting Secretary of War, the leave of absence granted HENRY P. BIRMINGHAM, *Captain and Assistant Surgeon*, in S. O. 39, March 13, 1891, Department of the Columbia, is extended one month.—Par. 2, *S. O. 81, Headquarters of the Army, A. G. O., Washington*, April 10, 1891.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING APRIL 18, 1891.

BEARDSLEY, GROVE S., *Medical Director*.—Appointed a delegate to represent the Medical Department of the Navy at the meeting of the American Medical Association at Washington, D. C., May 5th.

FLINT, JAMES M., *Surgeon*.—Appointed a delegate to represent the Medical Department of the Navy at the meeting of the American Medical Association at Washington, D. C., May 5th.

GRIFFITH, S. H., *Passed Assistant Surgeon*.—Detached from the U. S. S. "Dolphin," and granted one month's leave of absence from date of detachment.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING APRIL 18, 1891.

BAILHACHE, P. H., *Surgeon*.—To represent the Service at the annual meeting of the California State Medical Society, April 8, 1891. Detailed as Chairman of Board for the Physical Examination of Officers Revenue-Marine Service, April 14, 1891.

VANSANT, JOHN, *Surgeon*.—Detailed as Chairman of Board for Physical Examination of Officers Revenue-Marine Service, April 14, 1891.

AUSTIN, H. W., *Surgeon*.—Detailed as Chairman of Boards for Physical Examination of Officers and Candidates Revenue-Marine Service, April 14 and 15, 1891.

GASSAWAY, J. M., *Surgeon*.—Leave of absence extended five days, April 15, 1891.

STONER, G. W., *Surgeon*.—To proceed to Alpena, Mich., on special duty, April 12, 1891.

MCINTOSH, W. P., *Passed Assistant Surgeon*.—Detailed as Recorder of Board for Physical Examination of Officers Revenue-Marine Service, April 14, 1891.

MAGRUDER, G. M., *Passed Assistant Surgeon*.—Detailed as Recorder of Board for Physical Examination of Officers Revenue-Marine Service, April 15, 1891.

PERRY, T. B., *Assistant Surgeon*.—Ordered to examination for promotion, April 6, 1891.

WOODWARD, R. M., *Assistant Surgeon*.—Ordered to examination for promotion, April 6, 1891.

GOODWIN, H. T., *Assistant Surgeon*.—Ordered to examination for promotion, April 6, 1891.

VAUGHAN, G. T., *Assistant Surgeon*.—Ordered to examination for promotion, April 6, 1891.

GEDDINGS, H. D., *Assistant Surgeon*.—Detailed as Recorder of Board for Physical Examination of Officers and Candidates Revenue-Marine Service, April 14, 1891.

PERRY, J. C., *Assistant Surgeon*.—Detailed as Recorder of Board for Physical Examination of Officers Revenue-Marine Service, April 14, 1891.

GROENEVELT, J. F., *Assistant Surgeon*.—To rejoin station (New York), April 13, 1891.

ROSENAU, M. J., *Assistant Surgeon*.—To proceed to Cairo, Ill., for temporary duty, April 13, 1891.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication, or 250 reprints will be furnished instead of payment, provided request for reprints be noted by author at top of manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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